

**“The Wheels that Transformed the City: The Historical Development of Public
Transportation Systems in Shanghai, 1843-1937”**

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**“The Wheels that Transformed the City: The Historical Development of Public
Transportation Systems in Shanghai, 1843-1937”**

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Summary

The city of Shanghai was transformed from a treaty port of around half a million people when the British first arrived after the end of the Opium War to become the most populous, prosperous, and cosmopolitan metropolis in China by the early 20th century. The development of public transportation systems contributed significantly to the urban expansion and growth of the city, as well as in reshaping the city's identity. This dissertation examined the impact of public transportation on the urban landscape of Shanghai by focusing on three major issues: "tradition versus modernity", state and society relations, and the relationship between technology and society. As a divided city governed by three separate political jurisdictions, Shanghai offered a unique perspective in understanding the roles public transportation and urban planning played in changing a city's layout. This dissertation addressed the specific differences in the development of urban infrastructure and its impact on population growth, mobility and accessibility, and economic prosperity of the British controlled International Settlement, the French Concession, and the Chinese city.

The first half of the dissertation analyzed the roles in which "traditional" man-powered vehicles such as the wheelbarrow, sedan chair, horse-drawn carriage, and rickshaw played, before delving into the arrival of "modern" machine-powered vehicles such as automobiles, trams, trolleys, and buses in the early 20th century. Each form of transportation vehicle is discussed for its specific role, and the type of clientele it catered. This dissertation argued that man-powered vehicles and machine-powered vehicles did not necessarily compete with each other for passengers, as each type of vehicle served its specific purposes and clients.

Public transportation; just like food, clothing, or housing is a form of material culture where one's socioeconomic or class status is revealed by the type of transport one chooses. Because the different types of vehicles did not directly compete with each other, they all saw significant increases in ridership. The 'tradition versus modernity' theme is aimed at addressing the bigger picture of "continuity and change", where Shanghai was transformed by foreign influences yet at the same time it still retained traditional Chinese characteristics to form a complex identity.

The second half of the dissertation dealt with state and society relations, and the relationship of technology and society. The issue of public versus private responsibility is addressed with historical analysis of government orchestrated urban planning and the private sector providing the services to fulfill the people's needs and demands. In focusing on these two themes, this dissertation argued that technology has inherent political agenda attached to it, as government policies specifically created areas of the city which had better public transportation infrastructure, which led to these parts of the city being more commercially prosperous and vibrant than others. Routes, lines, and stops were designated with specific political purposes in mind, and public transportation accessibility contributed to the uneven economic developments across the city.

The Greater Shanghai Project of 1927-1937 was a specific attempt by the Chinese government to create a new city center that could shift the population away from the foreign concessions into the Chinese territories. This dissertation argued that this campaign would not have been feasible even without the Japanese attack due to insufficient public funds. The findings in this dissertation will hopefully add to the scholarship on the history of Shanghai and the history of technology in China.

Chapter 1

Introduction

The history of modern Shanghai has been a fascinating trajectory of growth and expansion from a treaty port created in 1843 following the Treaty of Nanjing that resulted from China's defeat in the Opium War to become China's most populous, prosperous and cosmopolitan city in less than a century had been a remarkable achievement and transformation. The creation, development, expansion, and upgrades in urban infrastructure had been among the most important and influential aspects of the making and remaking of the "New Shanghai", a modern and international cosmopolites that featured both traditional Chinese and Western lifestyles. The creation of urban infrastructure and the rapid population increases could not have occurred without the planning, facilitation, and implementation of a modern public transportation system unique to Shanghai that served as the necessary catalyst for the transformation of the city. The development of the public transportation systems mirrored other aspects of Shanghai's complex and fascinating evolution and identity as a city; where ancient traditional forms of man-powered forms of transport could coexist side by side with modern machine-powered vehicles from the West symbolized the greater complexity and dynamicity of a city with multiple governances, cultures, and identities.

The history of Shanghai did not begin with the Treaty of Nanjing. The beginning of Shanghai can be traced back to 1074 during the Song dynasty (960-1279). The two Chinese characters for the name "Shanghai" means "up" and "sea", which dated to the Song Dynasty during the 11th century where there was already a river flowing by a town. According to Shanghai historian Linda Cooke Johnson, the commonly abbreviated name of Shanghai in Chinese, known as *hu*, is derived from the name *Hu Du*, which was the name of an ancient fishing village that stood at the intersection of Suzhou Creek and the Huangpu River during the

Tang Dynasty. ¹The origin of the name “Shanghai” could have meant either “the upper reaches of the sea”, because due to the changing coastline, during the Tang Dynasty, Shanghai was literally on the sea or “to go onto the sea”, which suggested the original seaport status of the city.

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In *Shanghai: From Market Town to Treaty Port, 1074-1858*, Johnson chronicled the transition of Shanghai from being elevated in status from a fishing village (*cun*) to a market town (*zhen*) during the reign of Song Emperor Shenzong in 1074, marking its first appearance as a recognized town on the Song Dynasty’s map of China. In 1172, a second sea wall was built to stabilize the ocean coastline, to strengthen an earlier dike. After the fall of the Song, Shanghai officially became a city for the first time in 1297 during the Mongol ruled Yuan Dynasty (1271-1368), in which the area around Shanghai was designed as a county (*xian*) to be administered by the Songjiang Prefecture. Johnson noted that two important events helped upgrade Shanghai’s status during the Ming Dynasty (1368-1644). A city wall was built for the first time in 1554 in order to protect the town from raids by sea pirates. In 1602, Shanghai received a symbolic and spiritual boost from the construction of a City God Temple known as *cheng huang miao*. This temple statue is usually built in larger cities such as a prefectural capital, and was normally not built for a county town like Shanghai had been. During the Ming Dynasty, Shanghai began to grow in importance and stature due to its geographic location. ³

The city of Shanghai is located in a favorable geographic location due to its close proximity to the mouth of the Yangzi River flowing into the Yangzi Delta region. The Yangzi

¹ Cooke Johnson, Linda. *Shanghai from Market Town to Treaty Port, 1074-1858*. Stanford University Press/Cambridge University Press, 1995: Chapter 1, p.21-42.

² Danielson, Eric. *Shanghai and the Yangzi Delta: From Past to the Present*. Singapore: Times Publishing Ltd, 2004. P.8-10.

³ Cooke Johnson, Linda. *Shanghai from Market Town to Treaty Port, 1074-1858*. Stanford University Press/Cambridge University Press, 1995: Chapter 3, p. 66-95.

Delta region is a natural site for a coastal port, given its gateway location to the Jiangnan region where much of China's wealthiest agricultural lands are located and where much of the grain, cotton, tea, and silk are produced. Shanghai's location, as a basin at the confluence of Suzhou Creek and the Huangpu River can be easily protected from storms and attacks from the sea, yet offers easy access to the Yangzi River and the interior. Given that nearby Suzhou was already considered a pre-industrial manufacturing center and an important inland port, Shanghai functioned as a gateway port that linked the coast to the interior. During the Manchu ruled Qing Dynasty (1644-1911), Shanghai served as the connecting point between the circulation of commerce and goods from the interior with the coastal ocean shipping routes. In 1732, Emperor Yongzheng moved the customs office (*hai guan*) for Jiangsu province from the prefectural capital city of Songjiang to Shanghai, and gave Shanghai exclusive control over customs collections for all foreign trade in Jiangsu province. By 1735, Shanghai had essentially become the major trade port for the entire lower Yangzi River Delta region, despite being a low administrative level county town. ⁴

The strategic importance of Shanghai grew quickly in the 19th century, as the city's geographic position made it an ideal location for increasing trade with foreign powers from the West. By 1840, Cooke Johnson estimated that Shanghai's population could be ranked among the twenty or so largest cities in China. ⁵ After China's defeat in the Opium War (1839-1842), the consequential Treaty of Nanjing would forever change the urban identity of Shanghai and transform the city into a dynamic metropolis in the late 19th to early 20th centuries. It is here in 1843, when Shanghai would become a treaty port designed for foreigners, first the British and

⁴ Cooke Johnson, Linda. "Chapter 5: *Shanghai: An Emerging Jiangnan Port, 1683-1840*" in Cooke Johnson, Linda (editor). *Cities of Jiangnan in Late Imperial China*. State University of New York Press, 1993.

⁵ Cooke Johnson, Linda. "Chapter 5: *Shanghai: An Emerging Jiangnan Port, 1683-1840*" , p. 153.

later the French that radical urban transformations would take place, and this city would be different from any other city in mainland China.

This dissertation will begin in 1843 with the history of the “new modern Shanghai” and conclude on the eve of the Chinese Communist Party’s takeover of the city in 1949. In a span of a century, Shanghai witnessed a tenfold population increase, the creation of three separate zones of governance (including two sections ruled by foreign powers), and the complexity of an urban society that featured both traditional Chinese lifestyles and Western influences. My research will examine the impact of technology on public transportation in Shanghai’s urban expansion and population growths to become a major metropolitan city of international prominence by the early 20th century. The American historian of technology Langdon Winner argued that technology contains inherent political artifacts and represents the political agenda of those who intend to use technology for their own purposes.⁶ The urban infrastructure and public transportation systems in Shanghai were not designed just to alleviate traffic congestion, to allow the city to expand outward into the suburbs to deal with a high population density, or to merely improve and upgrade existing infrastructure in place. Public transportation technologies and development contained both direct and indirect political agenda, which allowed both Westerners in foreign controlled territories of the International Settlement and the French Concession, and the Chinese in Chinese controlled sections of the city to implement their own political authorities.

This dissertation will attempt to show that public transportation technologies had far more practical intentions and symbolic meanings than just the mass transit of people from one section of the city to another, but rather these technologies were designed and implemented to support the political powers at the time, in order to strengthen and justify their claims of political

⁶ "Do Artifacts Have Politics?" in *Daedalus*, Vol. 109, No. 1, Winter 1980. Reprinted in *The Social Shaping of Technology*, edited by Donald A. MacKenzie and Judy Wajcman (London: Open University Press, 1985).

legitimacy under the name of economic and social development. During this period of the introduction of new transport devices and vehicles, public transportation became a form of social economic expression and class identity. Residents and commuters utilized different forms of public transportation options available to public indicate and express their social class backgrounds. Public transit became a part of the growing material culture, just as food, clothing, and housing had been; where how one traveled and what type of methods one traveled publicly revealed one's social and class standing.

My dissertation will focus on three major themes. The first is on “tradition vs. modernity”. There has been much recent scholarship among Chinese historians discussing on whether China and particularly Shanghai was really backward. A critical part of this debate centered on the exact time period that China supposedly fell behind Western Europe; and the specific factors that contributed to China's inability to match European colonial powers in technological innovations. Joseph Needham and Benjamin Elman, prominent scholars of Chinese science and technology have shown in their works that Chinese cities had developed advanced and sophisticated urban infrastructure and political governance earlier than most Western countries up until the Ming Dynasty (1368-1644).⁷ Chinese historians Philip Huang and Kenneth Pomeranz's heated debates in the *Journal of Asian Studies* in 2002 argued over when exactly did China fall behind Europe, the specific reasons behind this, and how this gap continued to widen over time. Pomeranz argued that in his comparison of the Yangzi Delta region where Shanghai is located, the divergence with Great Britain occurred only after 1800, and it was the prevalence and availability of coal and oversea colonies abroad that gave Britain labor and valuable natural

⁷ Needham, Joseph. *Science and Civilisation in China*. Vol. 1-27. Cambridge UK: Cambridge University Press, 1954. Elman, Benjamin. *On Their Own Terms: Science in China, 1500-1900*. Cambridge: Harvard University Press, 2005.

resources that propelled Britain to surpass China.⁸ Huang disagreed and pointed out that China's high population density had resulted in agrarian involution, or significant marginal decreases in productivity in rural lands. Despite China's rapid population growths during the late Ming and Qing Dynasty, China remained an overwhelmingly rural and agrarian society where the majority of the Chinese populations were subsistence peasants while Britain became much more urbanized through the process of proto-industrialization.⁹

It is in this backdrop of historical events following China's humiliating defeat to the British in the Opium War and the subsequent treaties that Shanghai was turned into a foreign controlled treaty port in 1843. Given Shanghai's unique geographic and environmental conditions, which had differed significantly from major European cities, roads were much more narrow and winding, and alleyways connecting into residential neighborhoods were much more common. Shanghai's urban layout during the 19th century was much more suited for nimble, small-scaled man-powered vehicles such as the wheelbarrow and the sedan chair than the horse-drawn carriages that had appeared in the streets of European cities. When the British, and later the French arrived in Shanghai to carve out their own concession territories, they had to modify and adjust their blueprint models of the urban city to accommodate Shanghai's physical layout. Western technologies such as machine-powered vehicles arrived in Shanghai at around the turn of the 20th century, as new roads had to be built and old roads widened, electrification had to be installed, and safety measures had to be assured before motorized vehicles could be driven on Shanghai's streets.

After the arrival of Westerners, the city of Shanghai was divided into three separate zones, and controlled by three different governments. Foreign influences merged with or

⁸ Pomeranz, Kenneth. *The Great Divergence: China, Europe, and the Making of the Modern World Economy*. Princeton: Princeton University Press, 2000.

⁹ *Journal of Asian Studies*, vol. 61, no. 2, May 2002, p. 501-662.

incorporated with local influences and geography, and Shanghai became an intersection of Western and Chinese cultural influences. While foreigners brought about the introduction of modern technologies in public transportation, they had to learn to adapt and accommodate these technologies to fit into Shanghai's local context. Technological diffusion took place whereas Westerners had to learn from the Chinese in how to best utilize their technologies in order to meet Shanghai's specific geographic and environmental needs.

Even after the arrival of machine-powered motorized vehicles, the traditional forms of transportation such as the wheelbarrow and the sedan chair were not replaced or wiped out, but continued to coexist with more modern forms of public transportation. Shanghai's case went against Joseph Schumpeter's theory of creative destruction, where new technologies will inevitably replace old technologies as the natural progression of economic change.¹⁰ Instead, Shanghai's traditional Chinese transportation devices managed to coexist peacefully with newer forms of motorized vehicles on the same roads and streets of the city. Shanghai's urban history defied Schumpeter's creative destruction theory and showed that tradition and modernity did not necessarily have to conflict with each other, and that people did not necessarily have to replace the old with the new.

Why did the traditional and modern features of urban transport coexist in Shanghai? This thesis will show that given Shanghai's tenfold population increase in a span of a century, and the huge diversity in socio-economic status of Shanghai residents, each mode of transportation had its own customers and did not have to compete directly with each other for passengers. Public transportation became a form of public expression of an individual's social status and financial standing. Just as what kinds of food you ate, what types of clothes you wore, what type of house or dwelling you lived in, and how much formal education you received, how an individual

¹⁰ Schumpeter, Joseph. *Capitalism, Socialism and Democracy*. New York: Harper, 1942.

traveled in public and how you got from one section of the city to another revealed your social class. The wealthy residents comprised of foreigners living in the concessions, and well-to-do Chinese residents traveled by automobiles and taxis. Middle class residents traveled by bus, trams, trolleys, or rickshaws; depending on the location and distance of their destinations. Poor residents used cheap forms of transport such as third class with no seating on public vehicles, or the wheelbarrows which could balance multiple persons.

Passenger psychology is an important aspect of the emergence of public transport as part of Shanghai's material culture. How did passengers feel about being seen public using whatever mode of transport they choose? Did wealthy passengers look down at poorer passengers who could not afford to buy first or second class tickets with seating, or had to use cheaper forms of transport? Did poor commuters look at wealthy passengers who rode in comfortable automobiles or sat in first class seats with jealousy, envy, or resentment? What were the Chinese' attitudes and viewpoints toward foreign technologies? Were they in awe of Western technologies or were they despised for its foreign ways? This thesis will examine the transition and changing perspectives of Chinese attitudes toward witnessing foreign technologies such as machine-powered vehicles that were introduced into China by Westerners. Initially, there had been suspicion and skepticism about how foreign technologies could be successfully applied to and implemented in Shanghai. The numerous incidents of traffic accidents and safety concerns alarmed the Chinese and prevented them from fully embracing foreign modes of motorized transportation. However, gradually as foreign vehicles were able to improve their safety and efficiency, and successfully adapt to Shanghai's urban terrain, the Chinese began to accept and eventually embrace foreign transportation vehicles. Ensuring safety, both for passengers who rode in motorized vehicles, as well as for pedestrians walking on the streets and sidewalks had

been the critical factor in the Chinese acceptance for foreign vehicles. While the earliest tram, trolley, bus, and taxi companies had been foreign, by the early 20th century, many Chinese entrepreneurs (*hua shang*) began to purchase these vehicles from Westerners and started Chinese owned businesses. Inquisitive and alert Chinese businessmen learned about the opportunities to make significant profits in providing mass transit for residents, and learned from the Western owned companies' operations and management strategies of efficiency, costs, and profitability.

Annual statistics and data on the number of different types of man-powered and machine-powered vehicles in operation, the number of workers and laborers involved in the public transportation occupations, the prices of tickets, fares, and fees for each type of vehicle, the speeds and distances in which each mode of transportation traveled, and the number of passenger ridership for each form of transportation will be included and thoroughly analyzed. A key aspect of understanding the reasons behind the coexistence of “traditional” and “modern” forms of transportation will be looking at annual and decade increases in each type of transportation vehicle or device. While the numbers of all vehicles increased over time, certain types of vehicles increased faster in a certain time period or were more commonly used by commuters. The wide range of choices and methods of transportation will be compared to and analyzed against the annual and decade increases in the populations and demographics of Shanghai from the late 19th to early 20th centuries. The relationship between increases in each form of transport vehicles and the population increases, as well as the relationship between costs of each form of transportation in ticket prices or fares to average annual personal incomes of various occupations and social classes in Shanghai over time will be examined and discussed. These statistical data will better explain and interpret the factors that allowed “traditional” and “modern” transportation methods to exist side-by-side.

In describing the introduction, implementation, and eventual expansion of new technologies, it is important to ask whose perspectives are being brought into the light. When machine-powered motorized vehicles were introduced into China by Westerners, the actors and players involved include the government politicians, the engineers, the builders and drivers, and finally the customers. The government politicians had the power and authority to issue laws and regulations for the construction of new roads, and determine where different types of vehicles could be driven. Laws regarding safety standards, licensing, speed regulations, and parking are determined by the government officials in power over the jurisdiction or area in which they had political legitimacy to rule over. The engineers designed the new technologies, and while they could rely on old blueprint models of what had worked in Western cities, they had to learn to adjust, adapt, and modify their blueprints to fit these new technologies into Shanghai's urban environment. The builders built the new roads and assembled the vehicles, while the drivers drove these new motorized vehicles. Who had been considered qualified to become builders and drivers, what types of training did they have to receive, what types of licenses were required to become a tram, trolley, bus, or taxi driver? What types of salaries did these drivers, who are considered skilled laborers, receive in comparison to other unskilled laborers such as rickshaw pullers? Lastly, what roles did the customers play in the shaping of the construction of public transportation? Besides paying fares or fees, what other impact did customers have on any changes, modifications, or upgrades in public transport?

Each of these groups of actors and players bring a different perspective and viewpoint to the understanding of the construction and development of public transportation in Shanghai. This dissertation will attempt to shed as much light as possible on each of these groups of actors and players, by providing as much background information as possible. However, given the archival

resources and materials available, it appears that the perspectives of government officials and politicians who had the power and authority to plan, implement, and alter or make changes to public transportation systems will be discussed more thoroughly and in more in-depth details. Since there are more government documents, statistics and data available, this dissertation will focus more on the roles of the government, in both foreign controlled settlements and in Chinese sections of the city in public transportation and urban infrastructure developments from the late 19th to early 20th centuries. Government planning and government-directed initiatives contributed to the development and expansion of the public transport infrastructure, while government policies allowed for the coexistence of “traditional” and “modern” forms of transport options that catered to different segments of the population.

The second theme involves the state-society relationship. Shanghai is a complex city controlled by three different governments, each ruling a different section of the city. What were their relationships with each other? What were their policies of coordination between them? This thesis will look at the bargaining, negotiations, and compromises between the British controlled International Settlement, the French Concession, and the Chinese zones of the city. The Chinese learned about effective management and utilization of public transportation from the more developed and prosperous foreign controlled territories. Transportation and politics are inseparably linked in each political jurisdiction in Shanghai. The key issues are mobility and accessibility within the context of achieving specific political motives. Routes, lines, and stops were designated on purpose with specific political agenda in mind to ensure greater control over the city by the authorities (both Western and Chinese) over the areas in which they had control over.

An important part of this dissertation will focus on the Greater Shanghai Project of 1927-1937, which was a state building planning initiative by the Guomingdang (known as the Chinese Republican Party in the West) political party. By 1927, the Guomingdang (GMD) had defeated most of the provincial warlords and had begun to strengthen their power over China. The national capital had been moved to Nanjing, about 300 kilometers from Shanghai in nearby Jiangsu province. This thesis will critically break down this attempted state-control initiative to analyze how the Guomingdang regime used urban development to consolidate and solidify power. The Greater Shanghai Project could be seen as either a state-controlling mechanism to solidify power to a more grassroots level or as a government-orchestrated movement of national liberation and modernization. A key question is how did the Guomingdang government use nationalistic feelings among Shanghai's Chinese citizens to develop their own state building apparatus and control mechanisms? This dissertation will examine and discuss the idealistic goals and visions of the Greater Shanghai Project, which were twofold: 1) to attempt to shift the Chinese population of Shanghai away from the foreign controlled territories to the newly designated Chinese controlled city center in sparsely settled Jiangwan in order strengthen GMD control over the Chinese parts of the city, and 2) to show foreigners in control of the International Settlement and French Concession that a Chinese government could effectively manage and govern a modern cosmopolitan city. Discussion and analysis of the Greater Shanghai Project will focus on the realities and challenges that the Guomingdang faced such as insufficient public revenues to fund such an enormous public works project, a succession of several Shanghai mayors whose viewpoints on urban development may have differed from the GMD central government, and the impending Japanese invasion that destroyed any attempts to continue this expensive, long-term project.

Research here will focus on urban visual materials such as maps, photographs, statistical data and urban artifacts as evidence to examine how the Guomindang regime utilized urban public transportation to carry out their plans for the Greater Shanghai Project. This dissertation will analyze the issues of urban space transformation from the impact of public transportation on legibility, and how government initiatives attempted to redesign and revamp an entire city's urban infrastructure. Notions of urban identity, space, power, status, modernity, agency, and material culture will be instigated within the contexts of how foreign inventions were adopted and implemented to fit the existing urban geographic conditions, and how government involvement in urban planning attempted to reconfigure and alter the existing dynamics of urban layout. Archival materials will present a vivid portrayal of the city's population density, the construction of new neighborhoods, commercial, industrial, and residential areas, and suburban expansions that highlighted the importance of the public transportation systems in meeting the changing needs of the city's growing population as they commuted from their home to work, for shopping and entertainment, and for other purposes. Public transportation choices became a part of the material culture and urban consumption through the class differences in their selection of transportation modes.

James Scott's *Seeing Like a State* had shown that state-building initiatives have not always been successful, and have often backfired throughout history. Scott's case studies showed that when central governments impose legibility upon their citizens through high-modernist campaigns under the name of national economic or social development, these campaigns have often resulted in negative and unintended consequences. Quite frequently, local knowledge, known as *metis* was completely ignored. Scott concluded that in order for government-planned schemes to become successful in transforming the lives of their people, they must take into

consideration local conditions and knowledge and avoid high-modernist approaches.¹¹ This dissertation will discuss whether the Guomindang regime carefully examined and researched the population demographics, population needs, and differences in accessibility and mobility within Shanghai's residents when the Greater Shanghai Project was planned and implemented.

An important feature of the state-society theme is the public versus private relationship over who has the responsibility to provide certain goods and services for the people. For any government regime to acquire political legitimacy among its people, economic development such as improvement in the standard of living, more and better employment options, health care, education, leisure and entertainment, etc. must be addressed to appease the citizens' needs and wants. This is particularly important for an authoritarian regime, whereas improving the lives of the people the regime is attempting to control through large-scale development projects that actually addresses and answers the needs of the people would give the regime a sense of legitimacy in its governance. This dissertation will look at whether the Guomindang's Greater Shanghai Project actually addressed the important needs of its people, which areas were over-emphasized and which areas were not adequately emphasized. Based on the Guomindang's political agenda, whether the interests of the people of Shanghai were correctly identified and addressed will be discussed.

While the Guomindang planned and carried out their government initiatives to transform Shanghai, they only had the authority to govern the Chinese sections of the city: Nanshi, Zhabei and the sparsely settled district of Jiangwan that would later become their city center. The GMD was powerless to control the Chinese populations of the city that lived in the British controlled International Settlement and the French Concession. Given their limited power

¹¹ Scott, James. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press, 1998.

and control over the city, their campaign could only target the population living in Chinese controlled areas. This greatly reduced and limited the scale and scope of their campaign. Since the GMD is an authoritarian regime based on a republican platform rather a Communist regime under a state-planned form of governance, the public versus private issue became an even more pertinent aspect of the Greater Shanghai Project. Chinese businessmen and entrepreneurs had already established Chinese owned tram, trolley and bus companies. While the GMD had the power to establish new laws, regulations, and rules as well as make decisions on where new roads would be constructed, the public transportation industry in the Chinese sections of the city depended on Chinese owned companies to provide public transit services to passengers. The relationship between the GMD and Chinese businessmen (*hua shang*) who operated and profited from the increasing demands of providing transport for passengers will be analyzed through the contexts of the complex public versus private paradigm.

State-society relations in China dealt directly between the central government and the Shanghai municipal government during this time period. After Shanghai was declared a “Special Municipality”, where the city would be given special attention by the GMD, in July 1927, several mayors governed Shanghai. What kinds of relationship did the GMD central government have with each mayor? Did these mayors agree with the GMD’s Greater Shanghai Project initiatives? Or did the Shanghai mayors have their own personal agenda at stake that may have differed from GMD’s plans? The backgrounds, motives, and tenures of each Shanghai mayor during the Greater Shanghai Project will be described, and the reasons behind their rise and fall will be assessed.

The third theme will be the society and technology relationship. What kind of impact did technology have on the development and progress of a society? How did a society’s needs

trigger the technological inventions that responded to those demands? The perspectives of technological determinism versus social constructivism have been debated and argued by historians of technology for decades. This dissertation will ask and address the questions of whether Shanghai's rapid population growths from the late 19th to early 20th centuries was the direct results of the improvements made in public transportation, which facilitated expansion into suburban areas and made travel more convenient or accessible for residents? Or were Shanghai's enormous population growths and high population densities in certain areas the driving forces behind the development of a modern public transportation infrastructure in order to deal with urban population pressures? In connecting the third theme to my second theme, research will show how public transportation, like other forms of technology are embedded with political artifacts, and contains political agendas and motives. Key issues discussed will include who has the power to decide, design, implement, fund, and modify urban public transportation? What are their specific purposes or actions intended for? How public transportation technologies can be utilized to achieve specific politic, economic or social goals? In tackling the third theme, issues such as the residents' viewpoints of new changes in urban layout, their attitudes toward the reconfiguration of space, uneven accessibility and mobility, and their notions of material culture and consumption through public transport will be assessed.

Accessibility and mobility are critical issues here, since Shanghai's public transportation developments had been quite uneven. Certain areas that were better developed, or had been located closer to routes, lines, or stops became more accessible for residents, and in turn, those areas became more prosperous and vibrant. Other areas that had been neglected or were not located near routes, lines, or stops suffered as a result. Strategic planning was based on the political incentives of the government authorities in power rather than purely based on

geographic or environmental factors. Upgrades and improvements in public transportation made life easier and the city more accessible for commuters, but it also allowed the government authorities to strengthen their control. Maps or routes, lines and stops will illustrate the logic behind the government initiatives to indicate which areas of the city became the primary beneficiaries of strategic planning and which areas were left behind.

Society and technology relationship can also be directly linked to the first theme of “tradition and modernity”. Technological diffusion took place where foreign technological inventions in the form of machine-powered motorized vehicles appeared in Shanghai’s roads and streets, but those vehicles had to adapted and modified to fit Shanghai’s land terrain. Michael Adas’s *Machines as the Measure of Men* addressed the diffusion of Western technologies into non-Western colonial territories. Adas’s study of Western hegemony revealed that Western science and technology played significant roles in the creation of an ideology of Western superiority and advancement over non-Western peoples in the colonies. He concluded that this ideology of Western scientific and technological superiority became an integral part of the imperialistic civilization mission in European colonies and contributed to the rise of Western cultural hegemony. Adas’s key points focused on the perceptions of backwardness among non-Western peoples in the eyes of Westerners. Even when local technologies were perfectly suited for the local geographic or environmental conditions, Westerners labeled indigenous technologies as inferior based on their cultural norms or customs. When Western technologies did prove to be more effective or efficient, this technological progress was seen through the Western lens as a result of Western cultural superiority in their civilizing mission campaign.¹²

¹² Adas, Michael. *Machines as the Measure of men: Science, Technology and Ideologies in Western Dominance*. Ithaca: Cornell University Press, 1989.

In Shanghai's case, the city can be considered as a semi-colony in that Westerners controlled much of the city but not all of it. As more Westerners began to relocate and settle in Shanghai, providing the notions of Western comfort and the lifestyles available in Western cities became an important aspect of colonial development in both the International Settlement and the French Concession. Western technologies had to be imported into Shanghai to make Westerners feel more comfortable to their new surroundings. Western technologies transformed the city into a complex and dynamic environment where the modern urban lifestyles of the West existed alongside traditional Chinese ways of life. The arrival of Western technologies alter the landscape of Shanghai and differentiated the city from the rest of China, making Shanghai the most "Westernized" city in mainland China. Nevertheless, traditional Chinese cultural practices and lifestyles remained, and in many ways continued on relatively untouched by foreign influences. These contrasting yet interconnected features of Shanghai left lasting images of the polar opposites of a city with multiple identities. As a result, Shanghai was known simultaneously around the world both as the financial center of the Far East, a city of modernity and progress, and as a city of extreme decadence and backwardness.

The first half of this dissertation will include a historical overview of modern Shanghai from 1843 to the eve of the Communist takeover in 1949, and the transition from the man-powered vehicles to the machine-powered vehicles. The concept of "tradition and modernity" will be thoroughly analyzed and each form of transportation vehicle will be discussed for its advantages and disadvantages. Chapter 1 will provide the background on the history of modern Shanghai from the late Qing to the Republican era. Shanghai is introduced as a city with three governments, with two foreign controlled territories and one Chinese authority governing the Chinese zones. The history and backgrounds of the International Settlement, the French

Concession and the Chinese zones of Nanshi and Zhabei will be chronicled. Shanghai's specific geographic and environmental conditions such as roads and alleyways will be mentioned in details. The locations and reasons for the boundaries of the British controlled International Settlement, the French Concession and the Chinese sections will be emphasized to show the original plans for the future of the city. Major differences in urban infrastructure, city planning, and governance between foreign controlled territories and Chinese zones will be compared.

After the fall of the Qing Dynasty in 1911, a Republican government took power in China. A historical chronology and timeline of major events that took place in Shanghai, and the changes that occurred under Chinese jurisdiction will be presented. Population increases from both Chinese and foreigners arose quickly, and attention will be given to the reasons behind the population boom. The growth of the city's original boundaries will be introduced to portray an expanding city in both physical space and in population.

Chapter 2 will present the "traditional" aspect of public transportation. Traditional Chinese vehicles that had been utilized for centuries such as the wheelbarrow and the sedan chair will be critiqued for their usefulness and inconveniences. Notions of social class and the effects of the public display of personal travel will be examined through traditional man-powered vehicles invented in China. Chinese technological inventions will be assessed for their effectiveness and a brief history of China's scientific and technological advancements will be mentioned. The practicality and functions of the wheelbarrow and the sedan chair will be contrasted with each other to illustrate the opposite spectrum of the symbolic meanings of the "low class" wheelbarrow and the "high class" sedan chair before the arrival of foreign vehicles.

The introduction of the rickshaw from Japan had a profound impact on the urban landscape of Shanghai, both for practical and symbolic reasons. How the rickshaw, formerly

used as a vehicle to transport disabled people in Japan was modified and became popularized in China will be discussed. This form of technological diffusion and transformation highlighted the changing dynamics of Shanghai's population and her commuter's needs. The rickshaw would become the quintessential symbol of China's backwardness and the inhumane practices of exploiting cheap physical labor. Although the rickshaw had deep societal implications and symbolic meanings in that it was often seen as a sign of China's backwardness in the face of Western modernity, it created mass employment opportunities for the tens of thousands of poor rural migrants and allowed them to make a living in the city. The rickshaw could also be seen as an agent of social stability because without this form of public transport employment, the migrants and refugees that flooded Shanghai and significantly contributed to the city's massive population increases would have resorted to other means of survival, such as crime or begging that would be far worse for Shanghai's civil stability. Employment opportunities and exploitation will be discussed and examined, as man-powered public transportation provided an outlet for employment for many but also highlighted the cruelties of exploitation of cheap labor.

Chapter 3 will present the arrival of machine-powered vehicles during the turn of the 20th century. Different types of motorized vehicles such as automobiles, trams, trolleys, buses, and taxis all arrived on Shanghai's roads by the early 20th century. How people used public transportation to indicate and validate their social and economic status, the different clients who catered to different vehicles to move around the city, prices and affordability of each type of vehicles will be described in detail to show that while numerous forms of public transportation vehicles (both man-powered and machine-powered) existed for residents, they did not necessarily have to conflict with each other and that all these modes of transportation could coexist at the same time because they each served a specific purpose and catered to their own

clientele. In analyzing prices and affordability, public transit costs will be compared to the average wages of different occupations in the city, and how the costs for different vehicles or modes of transport compared to other forms of material culture and consumption such as food, clothing, leisure, etc.

This chapter will focus on the arrival of foreign transport technologies, how the Chinese viewed them and later accepted them, and how foreign technology was modified and diffused in Shanghai. While foreign technologies had been brought to Shanghai by Westerners, and had been implemented in the city, they could not completely phase out or replace traditional Chinese vehicles. The questions asked are how did the Chinese view foreign technologies and the role of human agency in accepting these new forms of vehicles in both foreign controlled and Chinese areas of the city? While they were initially imposed by foreigners on Shanghai to satisfy the Westerners' concept of a modern city modeled after the blueprints of European cities, the Chinese gradually accepted these technologies when it became clear that foreign technologies could bring many benefits to the city. This acceptance by the Chinese can be seen in the increasing passenger ridership each year of each form of machine-powered motorized vehicles once the Chinese residents saw the time-saving convenience and effectiveness that these vehicles provided. By the early 20th century, the Chinese incorporated foreign technologies to satisfy the demands and needs of their own interest in the creation of Chinese-owned companies. Western impact and native acceptance became a mutually beneficial relationship while the Chinese adopted foreign technologies to upgrade their existing infrastructure, and Westerners learned to modify their vehicles to better adapt to Shanghai's streets. Chapters 2 and 3 will provide detailed statistics and data on the number of each form of man-powered and machine-powered vehicles in operation on Shanghai's streets over time to look at patterns in increases, the number of

passengers who utilized each form of transport, the fares and costs for each vehicle, and the costs of the construction and maintenance of motorized vehicles.

The second half of this dissertation will focus on state-society relations, society-technology relations, and how public transportation fit into these complex relationships. Chapter 4 will deal with public transportation and politics. The key issues discussed will be of mobility and accessibility. Where were the new roads built, where were the location and placement of major routes and stops, and why were certain sections of the city better developed and more accessible than other areas? This thesis will show that the construction of new roads and the placement of routes and stops were designed with political intentions to designate certain areas of the city to be the commercial, industrial, or residential zones, and that road constructions and transit accessibility were instruments used to ensure that political agenda would be achieved. In both foreign controlled and Chinese controlled areas, the designation and placement of locations for routes, lines, and stops were designed with specific motives and intentions as considered to be beneficial by the government authorities in control of each section of the city.

Critical issues pertaining to public transport and politics such as the coordination between the three separate zones under three different governments, including how Chinese vehicles could navigate through foreign controlled territories; the bargaining, negotiations and compromises that were made, and how the foreign and Chinese territories learned from each other will be described to reveal the complexity of multi-governance in Shanghai. Licenses, regulations, and safety measures to reduce traffic accidents will be analyzed to support the thesis of the intertwined relationship between public transportation and politics. The public versus private relationship and responsibilities in the production of motorized vehicles became a critical feature of the state-society relationship. The passage of new traffic and safety laws, and

government licenses to drive and operate vehicles in each jurisdiction will be compared and contrasted with each other to look for similarities and differences between the International Settlement and the French Concession, and between foreign controlled and Chinese territories. The relationships between the private sector and the jurisdiction in which private companies reside in and operate their businesses will be observed.

Chapters 5 and 6 will focus on the Greater Shanghai Project of 1927-1937 under the Guomindang during the Nanjing Decade. Chapter 5 will focus on the GMD's initiatives, and the coordination and cooperation between the central government in Nanjing and the Shanghai municipal authorities during the first half of the Greater Shanghai Project from 1927 to 1932. During the first five years of the project, significant improvements were made including the construction of new roads and buildings in the Jiangwan district: home of the new city center. Jiangwan was divided into the administrative, industrial, commercial, and residential sections comprised of buildings and infrastructure necessary for each section. Significant financial costs were needed for this project, and numerous bureaus such as the Bureaus of Land, Public Works, and Public Utilities were created by the GMD to deal with the urban planning and construction of their ambitious goal of a new Shanghai city center in Chinese controlled Jiangwan. Government financial revenues and costs year-by-year will be shown to reveal how the Greater Shanghai Project was funded, where the expenses came from, what were the costs involved in such a large-scale urban project, and how increasing costs affected the speed and scale of the project from year-to-year. Despite the high costs, the first half of the Greater Shanghai Project can be measured as somewhat successful for the GMD. The contributions of Shanghai's mayors will be looked at to study the relationship between the municipal authority and the central

government to look for levels of willingness within the municipal authority to cooperate with the GMD.

Chapter 6 will cover the second half of the Greater Shanghai Project from 1932-1937 under the leadership of Mayor Wu Tiecheng, and discuss why the project failed to accomplish the goals and agendas that the GMD had envisioned. The Japanese invasion of 1931-32 and the enormous financial costs involved in the grandiose project proved to be too much for the GMD, and eventually their Greater Shanghai Project was abandoned in 1937 after the Japanese launched their full-fledged invasion of China. The ensuing Sino-Japanese War ended any attempts for the reconstruction of Shanghai during the GMD era. This chapter will attempt to tackle the question of whether the Greater Shanghai Project failed because of the Japanese invasion or whether this grand project would not have completely succeeded without the war due to insufficient finances and public revenues. According to population density statistics at the time, the GMD was unable to move large numbers of people away from the foreign controlled territories to the Chinese territories of the city. The chapter will explain why the GMD could not move supporting institutions necessary for a new city center to Jiangwan in such a short time period. Factors such as limited employment opportunities, as well as limited shopping and commercial venues, and schools discouraged Chinese residents to move away from the more densely populated and more prosperous International Settlement and French Concession into Chinese territories will be addressed to critique and understand why the GMD could not achieve their mission of population relocation.

Finally, the dissertation deals with society-technology relations, and will attempt to connect the theme of society and technology with earlier themes of “tradition and modernity” and state and society. Modern Shanghai’s historical development will be placed within the larger

framework of the history of technology's debate between the concepts of technological determinism and social constructivism. Technological determinists argue that society's development and progress are largely driven by technological forces, where technology determines a society's cultural values and defines what is "modern" and "progressive". However, social constructivists argue that technological artifacts are designed and utilized with particular meanings and intentions to fit into or attempt to satisfy society's cultural norms and values. The question asked in this chapter is whether developments in a modern public transportation system contributed significantly to the facilitation of population growths in Shanghai during the late 19th to early 20th centuries? Or whether it was the increasing population pressure and density that forced Shanghai to construct and develop a modern public transportation system in order to alleviate the high population growths and urban density by expanding outward into the suburbs and through more efficient and accessible mass transit? Looking back at Shanghai's public transportation history, development and governances through the perspectives of both technological determinism and social constructivism will be analyzed in order to better understand the impact both theories had on shaping Shanghai's urban landscape.

The conclusion will summarize the three major themes in Shanghai's urban transport history presented in the dissertation. The conclusion will attempt to answer the questions of Shanghai residents' cultural identity in the face of foreign influences; the transition in the Chinese reactions of suspicion, skepticism, awe, and acceptance of foreign machine-powered motorized technology over time; and the views on the Greater Shanghai Project as a state building plan versus actual reality. While, the Greater Shanghai Project was an attempted state organized project for more grassroots control, numerous difficulties and challenges prevented their plan from achieving its original goals and objectives. However, this thesis argues that the

Greater Shanghai project cannot be labeled as a complete failure because significant initial improvements were made, and the construction of new roads as well as upgrades in infrastructure were crucial to Shanghai's later developments. The plans for the Greater Shanghai Project was handicapped from the start because of poor timing, lack of complete Chinese control over the entire city, insufficient public revenues to finance such a large scale, long term project, and the Japanese invasion. Nevertheless, the Greater Shanghai Project indicated the potential or the possibility of developing a modern Chinese city under Chinese control given enough time, resources, and perhaps most importantly peace and stability.

The thesis of the political nature behind the creation and implementation of public transport technologies in shaping the development of Shanghai's urban infrastructure will be emphasized and reiterated in the conclusion. Access, availability, placement and location of public transport systems had been crucial in facilitating Shanghai's urban expansion and accommodating the tenfold population growths that took place. However, public transportation developments and resources had been uneven throughout the city, as certain sections of the city favored by the government authorities in power (both foreign and Chinese) became more prosperous and better developed, while other sections of the city considered unimportant were intentionally neglected and continued to lag behind. Public transportation systems had a direct impact on the growth and prosperity of the city, and in creating clear distinctions and disparities between different territories controlled by different political governances and jurisdictions in the evolution of Shanghai from a treaty port to a major cosmopolitan metropolis of international prominence from the 19th to the 20th centuries.

Chapter 2

The History of Modern Shanghai: Whose City Is It?

A critical issue in modern Shanghai history from the mid 19th century to the founding of the People's Republic of China in 1949 has been whose city is it? Is it a "foreign" city? Is it a Chinese city with "foreign" influences? Is it an international city? Since so many peoples from different nationalities have settled in Shanghai, the city has come to symbolize and represent the cultural diversity of the populations of people who call Shanghai "home". Yet no one nation or government really controlled Shanghai; different sections of the city were controlled by different forces and maintained separate identities. Shanghai is a multi-dimensional city that reflected seemingly polar opposite cultural forces: traditional and modern, Chinese and Western, continuity and change, wealth and poverty, opulence and decadence. These polar opposite forces coexisted together for a century, and in turn they each claimed a part of Shanghai's legacy, and together they all created and reshaped the identity of this dynamic city.

The International Settlement

China's defeat by the British in the Opium War (1839-1842) had finally revealed to the outside world the growing decay of the Qing Dynasty. The gap in economic wealth and political power between China and the West was growing far too significant by the mid-19th century. From June 16-August 29, 1842, victorious British troops occupied Shanghai. The Treaty of Nanjing, signed on August 29 marked the end of the Opium War, and forced the Chinese to open several port cities near the coast, Shanghai being one of them, to European trade. The first official British delegation did not arrive in Shanghai until November 1843, more than a year later.¹³ The year 1843 would mark the transformation of Shanghai from a Chinese coastal

¹³ Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p. 176-177.

market town to an internationalized city ruled by three different governments, and divided into three separate jurisdictions. The history of modern Shanghai would begin here.

On October 8, 1843, the Treaty of Bogue was signed by the British and Qing government in Humen (Tiger Gate) in Guangdong province that served as a supplement to the earlier Treaty of Nanjing. The treaty granted extraterritoriality and gave Britain most-favored nation status. These two treaties became the first of a series of “unfair treaties” that forced the weak Qing court to oblige to foreign demands. The significance of the Treaty of Bogue was that Britain would force the Qing to open five major ports: Shanghai, Ningbo, Xiamen, Fuzhou, and Guangzhou for British businessmen to reside in, and where British citizens who are charged with crimes cannot be tried under Chinese law. Britons living in China are to be governed by British law. Nevertheless, the Qing considered the treaty a victory because while they had conceded territories to the British, the treaty dictated that British citizens can only live and trade in these port cities. Foreigners were banned from traveling to and living in the interior regions of China.

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Shanghai had been conceded to the British in order to both appease their interests in trade and to prevent further encroachment of Chinese territories. Why was Shanghai selected as a treaty port? What attracted the British to want to reside and trade in this market town in the lower Yangzi Delta? British knowledge of Shanghai had been based on the reports of Chinese merchants and a small number of visitors during the 1830s. Shanghai first gained British attention in 1832 when Hugh Hamilton Lindsay, representing the East India Company stopped

¹⁴ Fairbank, John King. *Trade and Diplomacy on the China Coast: The Opening of the Treaty Ports, 1842-1854*. Cambridge: Harvard University Press, 1953: Chapter 10, p. 155-175.

by. In his report, Lindsay wrote positive descriptions of the city and called it “an important port with potential for trade”.¹⁵

Captain George Balfour, a commissioned officer in the British army led the first delegation to Shanghai. His delegation was met by Gong Mujiu, the most senior official in the Songjiang sub-prefecture where Shanghai was located. After an official reception, both sides officially declared the port as open for business on November 18, 1843.¹⁶ The British had chosen Shanghai because of the city’s proximity to Suzhou and access to China’s interior, strategic location close to the mouth of the Yangzi, and a potential location for imports and exports from all over the Yangzi River.¹⁷

Balfour and the British consul designated the Settlement to be near the point where the Wusong River met the Huangpu River. The designated area would be about three-quarters of a mile north of the Chinese city. The site would be connected to the bank of the Huangpu to the east, and bounded near the Wusong River, called “Suzhou Creek” by the British to the north, with an adjacent plot known as Lijiachang between the Settlement and the creek. The boundary to the south covered the area to Yangjing bang, near the city wall. The western boundary was moved to a ditch known as “Defense Creek”. The area between Suzhou Creek and Huangpu River had been chosen because the British consulate considered in the prime location for trade and commerce.¹⁸

¹⁵ Lindsay, Hugh Hamilton and Karl Gutzlaff. “Amherst Expedition”, p. 551 in Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p.182.

¹⁶ Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p.176-177.

¹⁷ Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p.183-184.

¹⁸ Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p.189.

Prior to the British arrival, the physical space of Shanghai, excluding rural counties had been quite small. The total surface area was about 31.8 square miles (82.4 square km), with the main part of the city covering only 13 square miles (33 square km). The British Settlement had covered much of the core of the city with an area of about 470 acres (0.7 square miles).¹⁹ While Shanghai County could be considered a fairly populous area with a population of around 540,000 by the mid 19th century, about half of the population lived in villages and small towns outside of Shanghai's county wall. In the area that the British chose for their settlement in the northern suburbs of the town, only around five hundred inhabitants live there.²⁰ Shanghai in the 1840s was not considered large in geographic size or in population density. The British realized that there would be plenty of room to expand, and many more people could be accommodated. The strategically desired location in this fertile area of the Yangzi Delta region would be crucial for potential development and expansion.

After the settlement territory had been identified, the next stage would be to encourage more settlers to come. The Shanghai Land Regulations, signed on July 11, 1845 officially legalized the British controlled International Settlement in their designated area. Afterwards, lots were measured and roads were marked out for British merchants to purchase. Individual merchants who wished to acquire land for themselves in the settlement had to make an application to the British consul, which then consulted with the individual. The individual had to explain to the consul what the purpose and use of their acquired land would be, and once approved, the merchant would put down cash a deposit and pay rent, or land tax for the lease. Merchants were allowed to build residence homes, storage facilities, churches, cemeteries,

¹⁹ Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p.26.

²⁰ Zou Yiren, *Jiu Shanghai renko*, p. 91 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p.26-27.

hospitals, schools, shops, and charity houses on their acquired land as long as they agreed not to destroy any Chinese graves in the area.²¹

While Shanghai had been located in a desirable area, the British quickly found the local environment to be unsuitable for their standard of living. Europeans had been very concerned with the natural and physical landscape of the city, which had contained diseases, difference in climates, and lacked clean sanitation. According to Karrie MacPherson, to Westerners who arrived in the mid 19th century, Shanghai was seen as “a wilderness of marshes”. The lack of a modern public health system and medical infrastructure had been a major British concern that they believed would discourage British merchants from settling in Shanghai.²² The British were determined to use their up-to-date scientific and medical knowledge to build the necessary medical and sanitary infrastructure, and hospital facilities to control epidemic diseases. Their goal was to turn Shanghai into “the largest and most cosmopolitan city in the East”.²³

The Shanghai Municipal Council was formed in July 1854 as the governing body that set forth laws and regulations for the International Settlement. British authorities faced tremendous challenges in their attempt to “modernize” their new concession. The first major task was to secure fresh water supply for pure drinking water. The waterworks project took ten years and required the assistance of experienced British civil and hydraulic engineers. Cholera had been a major health concern. The Municipal Council ordered the implementation of preventive medicine and institutionalized health care. British trained physicians were brought in to advise the Municipal Council on how to tackle these urgent and immediate health and sanitation issues.

²¹ Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p.191-192.

²² MacPherson, Kerrie. *A Wilderness of Marshes: The Origins of Public Health in Shanghai, 1843-1893*. Hong Kong: Oxford University Press, 1987: p. 1-2.

²³ MacPherson, Kerrie. *A Wilderness of Marshes: The Origins of Public Health in Shanghai, 1843-1893*. Hong Kong: Oxford University Press, 1987: p. 17.

Once cholera was under control, measures were taken to relocate slaughter houses, to abolish dirty unsanitary butchers' shops from operating, and later the Municipal Council prohibited the sale of uninspected milk and dairy products. The British focused their attention to the creation and functions of Shanghai's hospitals. In 1844, the London Mission Hospital, known as the "Chinese Hospital" began operation as the first foreign hospital in Shanghai. British practicing physicians arrived to train new doctors and nurses, including many Chinese to treat patients with Western medicine. Other hospitals and clinics sprang up in the settlement, and the Shanghai General Hospital, which had been a charity hospital for Europeans only, was eventually converted into a semi-public hospital that treated all patients: European and Chinese.²⁴ The British had to learn about the specific details and nature of Shanghai's geographic environment and local health care before being able to treat and control these diseases. The lack of clean sanitation had been a primary reason for the spread of diseases before. While British physicians constructed European style hospitals and treated patients with Western medicine, they had to take into account local knowledge, or what James Scott called *metis*²⁵ to successfully implement their health care system. Chinese physicians and nurses trained in these hospitals during the mid-late 19th century were among the first group of Chinese to be exposed to Western medicine, and their knowledge of their local surroundings assisted British physicians in being able to diagnose, treat, and heal patients. Chinese physicians and nurses were able to give feedback on how their Chinese patients responded to certain types of Western medicine in order to better diagnose various types of sickness and ailments.

²⁴ MacPherson, Kerrie. *A Wilderness of Marshes: The Origins of Public Health in Shanghai, 1843-1893*. Hong Kong: Oxford University Press, 1987: Chapters 6-9.

²⁵ Scott, James. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press, 1998.

The British were not the only foreigners to inhabit the settlement. Foreign citizens from other countries, such as the French and the Americans began arriving in search for commercial opportunities in Shanghai. These foreign nationals were not subjected to the authority of the British consul. As more Americans landed in Shanghai, a new site was selected for the U.S. consulate in 1847 on the other side of Suzhou Creek, outside of the British settlement. This new area, called Hongkou, would be known as the American Settlement. Nevertheless, many Americans continued to acquire land and build houses and godowns in the British Settlement. In 1854, as the international population grew more diverse in nationalities, a new code of regulations was approved to create the Shanghai municipality that would be split up into the British, American, and French territories.²⁶ The Westerners controlled a total of 3,806 Chinese *mu* (~2.5373 square km or 627.018 acres). The French Concession was included in the total area of the municipality but governance was administered separately. The boundaries of the International Settlement and the French Concession extended from Suzhou Creek in the north to the moat around the Chinese city in the south, and from the eastern boundary at the Huangpu River to the western boundary at Huchengpang creek.²⁷

²⁶ Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p. 243-245.

²⁷ Lu, Hanchao. "Shanghai tudi zhangcheng yanjiu" (Research on the land regulations at Shanghai) in Wang Pengcheng et al., eds, *Shanghai shi yanjiu* (Research of Shanghai City). Shanghai: Xuelin chubanshe, 1984: p. 100-145.

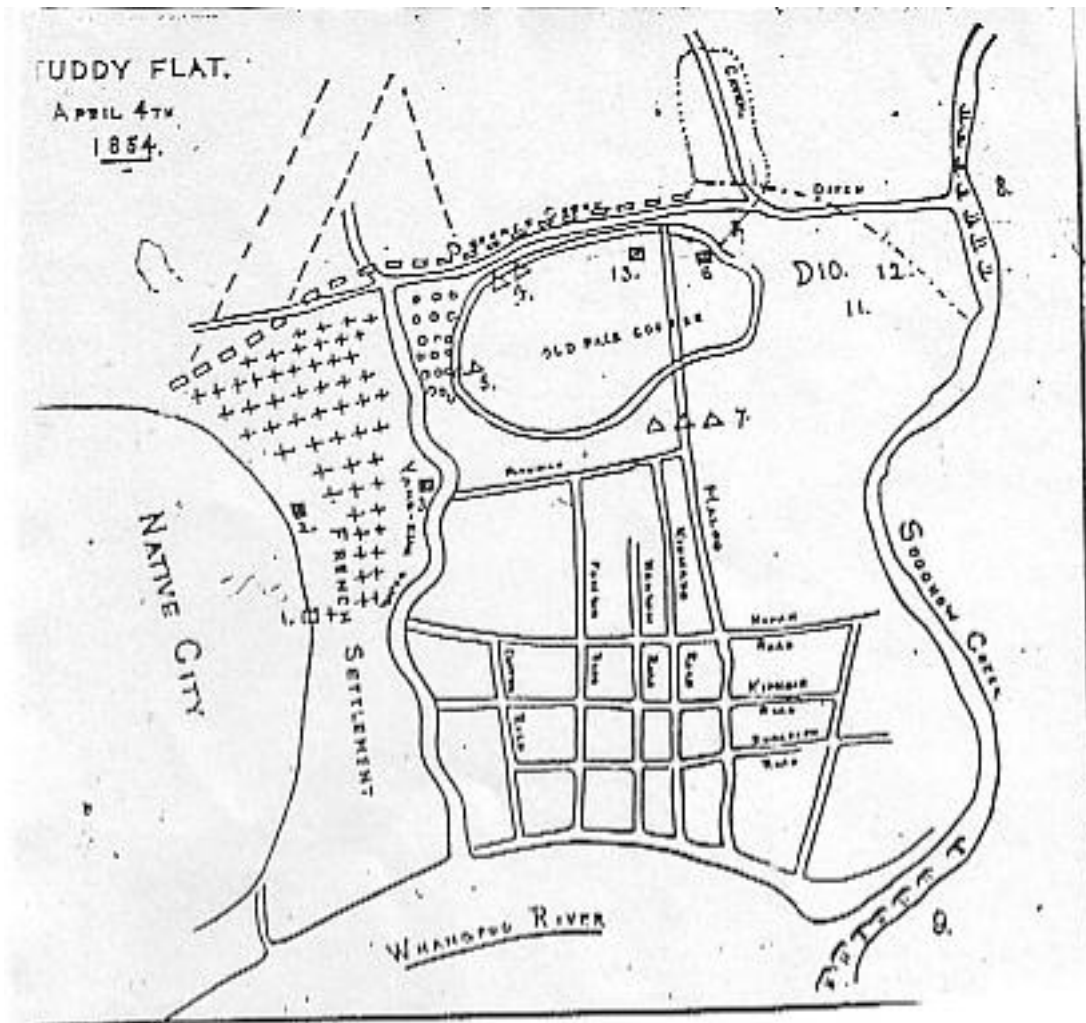


Figure 2.1: Map of British Settlement (1854)

This was the original boundaries between the British Settlement and the Native City. The borders of the International Settlement were Suzhou Creek to the east and Huangpu River to the south.

Source: *The North China Daily News*, April 4, 1864.

In 1852, ten years after the British first arrived in Shanghai; there were a total of about 500 foreigners in the settlement. Despite being only a tiny percentage of the city's total population, foreigners congregated in the settlement area. In this concession zone, foreigners were beginning to replace local Chinese residents.²⁸ Henry Shearman, a Briton living in Shanghai felt a weekly newspaper that could provide news, advertisements, and ways for other

²⁸ Zou Yiren, *Jiu Shanghai renkou*, p. 90-91; Lanning and Couling, *History of Shanghai*, 1: 292 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p. 32.

foreigners to exchange information would be necessary. On August 3, 1850, the first issue of the weekly newspaper *The North China Herald* was printed and distributed to foreigners in the settlement. With the expansion of commercial activities on Shanghai's coast, the newspaper began to publish a supplement entitled *Daily Shipping News* in 1856. This supplement edition provided foreign residents with information on when the next ship would arrive in Shanghai, when other foreign settlers would arrive, and if any resident decided Shanghai was not the place for them to stay, when the next ship back to Britain would be. As the newspaper began to become lengthier and covered more news, the name was changed to *The North China Daily News* on July 1, 1864. This name change resulted from the editors' viewpoint that it should combine the first two title words of the weekly *Herald* and the first and last title words of the *Daily Shipping and Commercial News* supplement. Published by the same company, the *North China Daily News* began to enjoy much more popularity and readership than its previous weekly newspaper *The North China Herald*. From July 1, 1864 to its last edition on March 31, 1951, nearly two years after the People's Republic of China was founded, the *North China Daily News* was the preeminent English speaking newspaper in China. No other foreign language newspaper had as long of a publishing history, which spanned three periods of political change in modern China: the Manchu Qing dynasty, the Guomindang Republican period, and the People's Republic. *The North China Daily News* covered the lifestyles of foreigners in Shanghai and the internal political development of China through weekly updates on events, activities, and breaking news that occurred there.²⁹

The availability and sale of land to individuals or families looking for a house had been frequently posted in the *North China Daily News*. As more British settlers moved into the

²⁹ Association of Research Libraries. Center for Chinese Research Materials, Ping-Kuen Yu (Director). *North China Daily News* Introduction. Chicago, IL.

settlement, the newspaper provided information on where they could acquire land and build homes, as well as lease homes for those intended for a short-term stay in Shanghai. In the July 7, 1866 edition, a column titled “Houses and Land” and “Land for Sale” described available options for the newly arrived.

The listings under “Houses and Land” included:

“To Be Let: Two Chambers in Yuen Ming Yuen Road. Apply to J.R. Eames, dated Shanghai, June 30, 1866.”

“To Let-The Dwelling House and Godown in Peking Road, adjoining “Washing” compound on the East, lately in the occupation of E.A. Reynolds, Esq. A large double-storied Godown with Chinese dwelling houses in front on Keangsoo Road, in the rear of “Washing”. Apply to R. Frances, Shanghai, Jan. 17, 1866.”

“To Let-The premises in Szechuan Road now in the occupation of Messrs Dow and Co. Apply to Smith Kennedy Co. Shanghai, June 2, 1866.”

“To Be Let or Sold- The house and business premises of present occupied by Undersigned. Possession can be given on December 1. Apply to Balance & Hallam, October 18, 1865.”

Under “Land for Sale”, listings included:

“By order of the Trustees of Lindsay & Co’s Estate: Valuable building land, situated in the most central part of the English Settlement. To be sold in lots to suit purchases, all that large compound on which Quong-Loong Hong stands. Further particulars may be obtained. The Trustees of Lindsay & Co.’s Estate at Quong Loong Hong. Shanghai, May 16, 1866.”

“Dwelling house with all necessary offices and servants’ rooms, stabling, with or without godown, in the most central part of English settlement. For particulars, apply to The trustees of Lindsay & Co.’s Estate at Quong Loong Hong. Shanghai, April 25, 1866.”

“To be let-with immediate possession: A large office, a tea or silk room, two compradore’s rooms, and a treasury, situated in the Hong Kong Road, in front of the premises of the occupation of I. Hancock, Esq. For further particulars apply to Cowie & Co., Shanghai, May 26, 1866.”

“To be let-with immediate possession: The dwelling house and premises lately in the occupation of Messrs, Oxford & Co. On the ground floor, are large offices and a godown, on the upper floor, a drawing room, dining room, silk room, and six bedrooms, servants’ office at the rear. For further particulars, apply to Cowie & Co. Shanghai, May 28, 1866.”

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³⁰ *The North China Daily News*. July 7, 1866.

“To Let: From October 1st. The dwelling house known as Bird’s Bungalow, situated on the North side of the Bubbling Well Road, opposite Mr. Myburgh’s. Apply to Hower, Hanbury & Co. Shanghai, August 30, 1867.”

“For Sale: All the desirable property situated in the Foochow Road, immediately opposite the premises in our own occupation, consisting of eight mows of land or thereabouts (purchasing about 400 feet frontage to the Foochow Road and 150 feet to the Shantung Road and the following buildings there on. 1: A large foreign built dwelling house, facing south, with a large garden in front, and containing four rooms on the ground floor and four on the upper floor. 2: A block of 26 native buildings producing at present a monthly rental of 78 pounds. For further particulars, apply to Cowie & Co. 27 Foochow Road. Shanghai, August 14, 1867.”

“To Be Let: The premises lately in the occupation of Messr, Glover & Co. situated in Macao Road, consisting of dwelling house and offices, with 4 rooms on the ground floor, 3 rooms, pantry, and compradore’s office on the first floor. One two storied godown and stabling for 5 horses. For particulars, apply to Glover & Co. Shanghai, July 4, 1867.”³¹

This section in the newspaper was listed in the advertisement section. By facilitating information on where open spaces were, where housing could be found, and whether the land could be sold or leased, the *North China Daily News* helped newly arrived British settlers feel more comfortable and settled in their transition to Shanghai. Gradually real estate agents or firms began to take a more active role in advertising available real estate property as they saw a demand for housing from new settlers and an opportunity to make profits. Descriptions of houses and land available to be sold or leased became longer and more detailed.

Besides land and houses, other information such as the opening of new firms and stores were also published in the weekly paper. The *North China Daily News* became a public forum where information could be exchanged.

“E. Aurbach & Co: Ship chandlers, storekeepers and auctioneers. E. Aurbach & Co. beg to inform masters of vessels and others visiting that they have establishment a branch of their business at that port, and trust by attention and a well assorted stock to merit their support. Dec. 1, 1865.”

³¹ *The North China Daily News*, September 6, 1867.

“The Shanghai Gas Company: Tenders are invited for loans for one or more years, on the security of the land, plant, and buildings belonging to the company. Cowie & Co. Agents of Shanghai Gas Company. July 4, 1866.”³²

“Benson’s Watches: Clocks, jewelry, silver, and electro plate. Wholesale and retail. Watches: adapted for every class, climate, and country. Clocks: drawing, dining, and bedroom.”

“Wellington Knife Polish: John Oakey & Sons. Manufacturers of emery, black bond, cabinet glass pape, emery and glass cloth. For cleaning and polishing silver, electro plate, plate glass, etc.”³³

“China Fire Insurance Company. Agencies are established in the several ports in China and Japan. All communications on the business of the company to be directed to the secretary. Office hours, 10 to 4 o’clock. F.E. Gwyn, Secretary. Shanghai, June 18, 1866.”

“Notice: Liverpool, London and Globe Fire Insurance Company. The undersigned are authorized to grant policies against fire on buildings and their contents in this port. Dow & Co. Shanghai, Jan. 1, 1867.”³⁴

The Shanghai Land Regulations of 1845 stated that Chinese residents could not rent property from foreign controlled territories. Gradually, Chinese residents were evacuated and the foreign controlled areas were to be exclusively reserved for foreigners.³⁵ This policy of segregation was geared toward preventing racial or ethnic riots between foreigners and Chinese due to their differences in language, culture, and ways of life, as well as to prevent foreigners from moving deeper into Chinese territory. The Chinese believed that if foreigners were happy and content living where they were in their concession settlement, they would not want to expand further and penetrate deeper into the Chinese interior.

³² *The North China Daily News*, July 7, 1866.

³³ *The North China Daily News*. July 21, 1866.

³⁴ *The North China Daily News*. Sept. 6, 1867.

³⁵ Lu, Hanchao. “Shanghai Tudi Zhangcheng Yanjiu”. (Research on the Shanghai Land Regulations) in *Shanghai Minshi Wenti* (Research on the history of Shanghai), Qian Shuming, Yang Qimin, Wang Pengcheng, Zheng Zuan, and Lu Hanchao (editors). Shanghai: Xuelin Chubanshe, 1984: p.100-145.

Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p. 29.

Segregation between Chinese and foreigners lasted from 1845 to 1853. The British population was still relatively small. However, a riot turned uprising by a Fujian-based secret society called the Small Swords attacked neighboring counties near Shanghai. The ensuing seventeen month war between the rebels and the Qing officials resulted in tens of thousands of rural villagers who fled to Shanghai in search of safety. Many of these refugees sought protection and shelter in the International Settlement where they felt they would be safe. Suddenly, the previously decreed segregation policy could not resist such a large refugee population. Within two years, the population of the settlement soared from around 500 foreigners in 1853 to more than 20,000 in 1855.

The foreigners were divided on their opinions of the Chinese migrants. Foreign merchants saw the arrival of the Chinese as an opportunity to make money. Refugees needed places to stay and there were plenty of open space available. Many of the refugees that fled had been wealthy merchants or landlords themselves. Other Westerners were quite concerned and worried that an influx of Chinese inhabitants would threaten their ways of life.³⁶ Eventually British consul Sir Rutherford Alcock decided in July 1854 to appease the merchants and allowed Chinese inhabitants to reside in the settlement. Evicting and preventing any further Chinese migrants into the area would not be possible since the foreigners would always be greatly outnumbered. Western businessmen had sensed the opportunity to capitalize on such a large and desperate Chinese migrant population.³⁷ The settlement was very sparsely populated and had plenty of room to grow. This decision by Alcock would have a profound impact on the future of

³⁶ Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p.32-33.

³⁷ Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p. 34.

Shanghai, and set the course for the end of forced segregation between foreigners and Chinese, and the beginning of the mixed residence that characterized Shanghai for the next century.

Given the large influx of population that flocked to the settlement, the British consulate decided that order needed to be restored, and that the settlement needed to expand and grow. A police department with thirty employees was established to maintain law and order, and remove any criminals from the area. To prevent the settlement from gaining a bad image, the British authority quickly removed questionable Chinese houses, brothels, opium dens, and fire hazards. City planners decided to build the necessary infrastructure to better accommodate the growing population. Rectilinear design of the streets and its architectonic design effectively separated private residences and public spaces.

“The Bund”, an area along the edge of the Huangpu River and the streets where commercial buildings were located became public spaces, open for anyone: Westerner or Chinese to walk on. The British race course, where horse racing contests could be held and the Public Garden were considered public spaces in practice. Commercial buildings, wharves, godowns, shipyards, shops, and other working places were private property since these areas were owned by private capital, but public access during working hours were allowed. The area behind the Bund where private homes and gardens were located became residential areas. Churches, cemeteries, and mission buildings were considered sacred spaces, and access was only allowed for church or mission members, or families of the deceased buried in the cemeteries. The International Settlement became an oasis amidst a Chinese city where European architects designed their concession based on the design of European cities: where leisure space was separated from commercial space, residential areas separate from industrial areas such as

shipyards and docks.³⁸ Though only a small minority in their own concession territory, Europeans could enjoy the layout and surroundings similar to the cities back home; and with more commercial and leisure infrastructure in place, Westerners living in Shanghai could live more comfortably, and enjoy the lifestyles they had in their home countries.

The Taiping Rebellion that engulfed China from 1850-1864 brought about tens of thousands of more refugees from other provinces fleeing the violence and terror of the civil war between Hong Xiuquan's Taiping forces and the Qing government. In 1865, after the Taiping revolt had been defeated and peace had been restored, the population of the International Settlement grew to 92, 884.³⁹ Despite constant new arrivals, the number of foreigners remained small compared to the total population. It was estimated that 97 percent of the population was Chinese.⁴⁰ In a population census conducted in 1865, a total of 5, 129 foreign citizens were found to have lived in Shanghai during the past year. Of those, 2,297 were considered permanent residents in that they had homes there. The others were temporary settlers who stayed in Shanghai short-term including many sailors and soldiers. Of the foreigners, there were 3,996 Britons (77.90% of the foreign population), 407 Americans (7.94%), 240 Germans (4.68%), 131 Danes (2.55%), 118 Spaniards (2.30%), 38 French (0.74%), and 199 citizens from other countries (3.88%).⁴¹ It is imaginable to assume that many Chinese residents moved to the foreign controlled territories not only for safety and protection, but because the foreign settlement had better infrastructure and facilities, and provided a higher standard of living than

³⁸ Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p. 327-328.

³⁹ Zou Yiren, *Jiu Shanghai renkou*, p. 3-4, 90-91 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p. 32.

⁴⁰ Luo Zhiru, *Tongjibiao zhong zhi shanghai*, 22; *Shanghai nianjian 1936*; Xu Run, *Xu Yuzhai zixu nianpu*, 295-297; Zou Yiren, *Jiu Shanghai renkou bianqian*, tables 1, 22, 50 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p. 42.

⁴¹ Kuai, Shixun ed. "Shanghai gonggong shijie shigao", (Shanghai International Settlement History), Shanghai: renmin chubanshe, 1980: p. 318 in Xiong Yuzhi, Zhou Wu and Er Dongqiang, eds. *Shanghai: Yizuo xiandai hua doushi de biannian shi*, (Shanghai: A Modern City's History), Shanghai: shudian chubanshe, 2007: p. 110.

the Chinese sections of the city. Since the concession was controlled by foreigners, Western laws governed the jurisdiction of the area. Chinese citizens living there would be exempt from Chinese laws that governed the rest of the city, and would instead follow foreign legal institutions.

The British represented the majority of the foreign residents in the International Settlement. Since the British and the Americans spoke the same language: English, communication and dialogue between the British and American consulates have been easy. Given the small number of Americans, and practical matters such as joint policing, the American Settlement was incorporated into the British International Settlement in September 1863. The 1869 revised Shanghai Land Regulations would serve as the legal document that officially merged the British and American Settlements into one, now just called the International Settlement.⁴²

The settlement provided an ironic twist: a Western controlled and governed territory in the midst of a Chinese city that was overwhelmingly populated by Chinese citizens. Western merchants were able to capitalize and make profits over the growing population of Chinese residents in search of housing, food, utilities, and transportation. While some Chinese interacted with and learned about Western culture and lifestyles from the foreigners, many Chinese had few contacts with Westerners. Chinese inhabitants of the settlement lived their lives and raised their families just like they had before, and most had seldom if any direct contacts with foreigners.

What was the relationship between the Shanghai municipal officials and the foreigners in the creation of the concessions? How did the Chinese officials run the Chinese city? The critical person that served as the intermediary between the Qing imperial court in Beijing and local

⁴² Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p.35.

Shanghai residents had been the Shanghai taotai. The taotai ranked below provincial level officials, such as governors, or governor-generals. But the taotai was considered to be the most important and influential Chinese political figurehead in Shanghai, outside of the foreign territories. There had been eighty men who occupied the position of taotai between 1730 and 1911. The Shanghai taotai's roles had been to bridge the gap between central and local political interests, and they had often been caught between the forces of "tradition" and "modernization", or between the ideas of foreign commerce and Chinese culture. By conceding territory and allowing for Western commerce, Shanghai taotai Gong Mujiu believed that the foreigners would be satisfied with their limited space as a treaty port. After all, it was only a small area and only a few hundred Europeans lived there. Gong and his succeeding taotais did not feel small foreign concession areas could affect the rest of Shanghai.⁴³ However, as more European settlers arrived, and the large number of Chinese refugees and migrants into foreign controlled territories, the Chinese areas of the city began to lose influence and status.

The increasing population growth in the settlement caused the British to build more roads and houses to accommodate the rising number of residents. By 1865, twenty six major roads had been constructed in the settlement, with thirteen roads going from south to north. These roads were Yangzi Road, Yuanming Yuan Road, Sichuan Road, Jiangxi Road, Henan Road, Shandong Road, Shanxi Road, Fujian Road, Zhejiang Road, Hubei Road, Guangxi Road, Yunnan Road, and Xizhang Road. The other thirteen major roads went from east to west, and were named Suzhou Road, Hong Kong Road, Beijing Road, Xiamen Road, Ningbo Road, Tianjin Road, Nanjing Road, Qiujiang Road, Hankou Road, Fuzhou Road, Guangdong Road, Wuhu Road, and Songjiang Road. These roads were all named after the names of provinces and cities throughout

⁴³ Leung, Yuen-Sang. *The Shanghai Taotai: Linkage Man in a Changing Society*. Honolulu: University of Hawaii Press, 1990.

China. In 1864, after the merger of the British and American Settlements, two new roads were constructed to link the two zones together. These two new roads: Wusong Road and Bailaohui Road allowed transportation to flow to and from the newly merged settlements.

In 1854, paved roads covered only about 0.0784 square km or about 14.2% of the total area. After heavy investments during the late 1850s and early 1860s, paved roads had covered about 23% of the total area, which was much higher than any other Chinese city.⁴⁴ In the eastern section of the International Settlement, the typical road was about 22-30 inches wide, which was considerably narrower than the main streets of major European cities. The British faced problems from the lack of lighting on the roads and the inability to get ride of wastes or install an efficient sewage system. Wider roads, such as North Yunnan Road (1868), Niuzhang Road (1881), Beihai Road (1882), and Kunshan Road (1883) were constructed to link existing roads to each other. A series of measures were implemented to make the roads more efficient for use. In 1866, British civil engineers arrived to install lights on major roads so settlers would not be afraid to go outside after dark. Hydraulic engineers began working on installing a city water sewage system. By the early 1870s, a sewage system capable of getting ride of wastes was completed. In 1870, a decree was issued that newly constructed roads should have a width of at least 40 inches.

After the completing of major roads, bridges were built on top of rivers to link the settlement together. On November 1872, the construction of a bridge on top of Suzhou Creek began. The project was finished in just seven months, and was named “Park Bridge”. In 1875, another bridge was built on top of Henan Road, and throughout the 1880s, bridges were completed on top of Fujian Road, Zhejiang Road, and Jiangxi Road. The growth of the

⁴⁴ Zhang, Zhongkong. *Jindai Shanghai Chengshi Yanjiu*. (Research of Modern Shanghai City). Shanghai: renmin chubanshe, 1990: p. 223 in Xiong Yuzhi, Zhou Wu and Er Dongqiang, eds. *Shanghai: Yizuo xiandai hua doushi de biannian shi*, (Shanghai: A Modern City's History), Shanghai: shudian chubanshe, 2007: p. 180-181.

International Settlement saw the transformation of previously rural land that was very sparsely populated into well-designed commercial and residential areas.⁴⁵ Foreigners, especially the British had managed to turn a spartan piece of land within a treaty port into a modern and prosperous colonial oasis, where Westerners could begin to enjoy comforts similar to back home.

It took about fifty years of continuous investments, improvements and upgrades in urban infrastructure before Shanghai became one of the leading cities of the East. By 1893, Shanghai's International Settlement had been transformed into a modern metropolis. Kerrie MacPherson attributed Shanghai's rise in global status to "improved health and sanitary conditions had contributed directly and substantially to a dramatic alteration in the ordering and conduct of communal social life".⁴⁶ Half a century after Westerners had arrived, they had established a new city that catered to their ways of life and satisfied their quality of living. Shanghai had been transformed during the late 19th century, and the 20th century would take Shanghai to the forefront as the leading place of commerce and trade in Asia.

The French Concession

Unlike the Americans, who willingly incorporated into the British controlled International Settlement, the French were absolutely insistent on having their own piece of territory as their own concession. There were several major reasons behind this. The French had been rivals with the British in the race for overseas colonies. As the British claimed new colonial territories throughout the world, and acquired the nickname "the sun never sets on the British Empire", the French competed aggressively but often times France looked at Britain with envy. Just like elsewhere in Africa and Asia, the French wanted to prevent the British from having a

⁴⁵ Xiong Yuzhi, Zhou Wu and Er Dongqiang, eds. *Shanghai: Yizuo Xiandaihua Doushi De Biannian Shi*, (Shanghai: A Modern City's History), Shanghai: Shudian Chubanshe, 2007: p. 181-183.

⁴⁶ MacPherson, Kerrie. *A Wilderness of Marshes: The Origins of Public Health in Shanghai, 1843-1893*. Hong Kong: Oxford University Press, 1987: p. 267.

political monopoly on the colonies. Whenever Britain acquired new colonies, the French quickly followed, not wanting to be left behind in this great scramble for colonial territories. In Shanghai, the French watched the British seize control of the International Settlement and build their community there. France demanded to have their own territory within Shanghai.

Beside the colonial rivalry, the French differed from the Americans in that they spoke a different language from the British. Since they did not speak English, the French settlers did not want to be ruled by “Land Regulations” or other treaty documents written in English. They wanted to use French as the official language of governance. The French also differed from the British in that France was a predominately Catholic country. The French wanted to build Catholic churches, set up Catholic missions and schools in China. Living in the British controlled territory would prevent them from speaking their own language and practicing Catholicism.⁴⁷

The French consulate in Shanghai was instituted by M. Charles de Montigny in January 1848. The newly appointed consul asked the presiding Catholic bishop for a loan of land. After the bishop agreed to loan him one of the unoccupied houses on the north-wall site, the French consul proclaimed the beginning of the French Concession. The Chinese taotai Gong Mujiu believed that any and all foreigners should be treated the same and be governed by the British consulate. This greatly angered de Montigny, and after unsuccessfully trying to lease more land from the British, he threatened to ask the French government to bring in French gunboats. The Chinese authorities eventually gave in to the French demand.⁴⁸

A Chinese official named Lin Gui designated the boundaries of the French concession: south of Yangjingbang and north of the moat skirting the city wall, bounded on the east by the

⁴⁷ Cady, John. “The Beginnings of French Imperialism in the Pacific Orient.” *The Journal of Modern History*, Vol. 14, No. 1 (March 1942), p. 71-87.

⁴⁸ Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p.245-247.

Huangpu River and the Chaozhou Huiguan, and the on west by the Guandi Temple and the Zhoujia Bridge. On April 6, 1849, the French Concession in Shanghai was officially established. Modeling after the British's Shanghai Municipal Council, on May 1, 1862, the French Municipal Council was created under the authority of the French consul-general as the official governing body of the French Concession.⁴⁹ French expatriates were delighted that they had their own territory, and that their concession would not be subjected to the Land Regulations. While initially an exclusively French area, the flood of Chinese refugees from the Small Swords Rebellion and later the Taiping Rebellion overwhelmed the French. Around 50,000 Chinese migrants flocked to the French Concession, just like they had in the International Settlement in search for peace and safety. In all, more than 110,000 Chinese migrated to the foreign controlled territories at the end of the Taiping revolt in 1865.⁵⁰ Like the British, the French were living among the overwhelmingly Chinese majority in their own concession.

To deal with the growing population from both French and Chinese settlers, the French needed to construct urban infrastructure to support their concession. Much of the construction in the French Concession was centered around the Xuhui district. One major street was named Shengmu Road, since the Catholic cathedral was located there. Other French names roads included Geluo Road, Luban Road, Mintiniying Road, Aitang Road, Huagenie Road, Baicaini Mengmalang Road, Jialei Road, Huacheng Road, Annajin Road, Pingjili Road, Aolihe Road, Weiermeng Road, Mengzifu Road, Moliai Road, Lagen Road, etc. The naming of the roads in

⁴⁹ Maybon, Charles and Jean Fredet. *Histoire de la Concession Francaise de Changhai* (History of the French Concession in Shanghai). Paris: Librairie Plon et Nourrit, n.d., 1929: p. 34-35.

⁵⁰ Zou Yiren, *Jiu Shanghai Renkou*, p. 3-4, 90-91 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p. 32.

the French Concession clearly sowed the French Municipal Council's colonial attitudes toward making sure French citizens feel at home in Shanghai.⁵¹

Compared to the International Settlement, far fewer French citizens moved to Shanghai than the British. There were only a total of about 460 foreigners living in the French Concession, out of about 50,000 people total. Foreigners made up less than 1% of the population there. The French numbered 259 (56.30% of the foreign population), the Americans 64 (13.91%), the Germans 42 (9.13%), British 19 (4.13%), Greeks 16 (3.48%), Portuguese 14 (3.04%), Turks 14 (3.04%), Dutch 12 (2.61%), Austrian 10 (2.17%), and ten others (2.17%).⁵² Just as they had in the International Settlement, most Chinese residents had very few if any contact with foreigners in the French Concession. The Chinese migrants were attracted to the French Concession not only for safety and protection from the Chinese civil war that ravaged much of the country during the mid 19th century, but also because the French Concession had better infrastructure and appeared wealthier and better maintained than the Chinese parts of the city.

⁵¹ Xiong Yuzhi, Zhou Wu and Er Dongqiang, eds. *Shanghai: Yizuo Xiandaihua Doushi de Biannian Shi*, (Shanghai: A Modern City's History), Shanghai: Shudian Chubanshe, 2007: p. 183-185.

⁵² Kuai, Shixun ed. "Shanghai gonggong shijie shigao", (Shanghai International Settlement History), Shanghai: renmin chubanshe, 1980: p. 318 in Xiong Yuzhi, Zhou Wu and Er Dongqiang, eds. *Shanghai: Yizuo xiandai hua doushi de biannian shi*, (Shanghai: A Modern City's History), Shanghai: shudian chubanshe, 2007: p. 110.

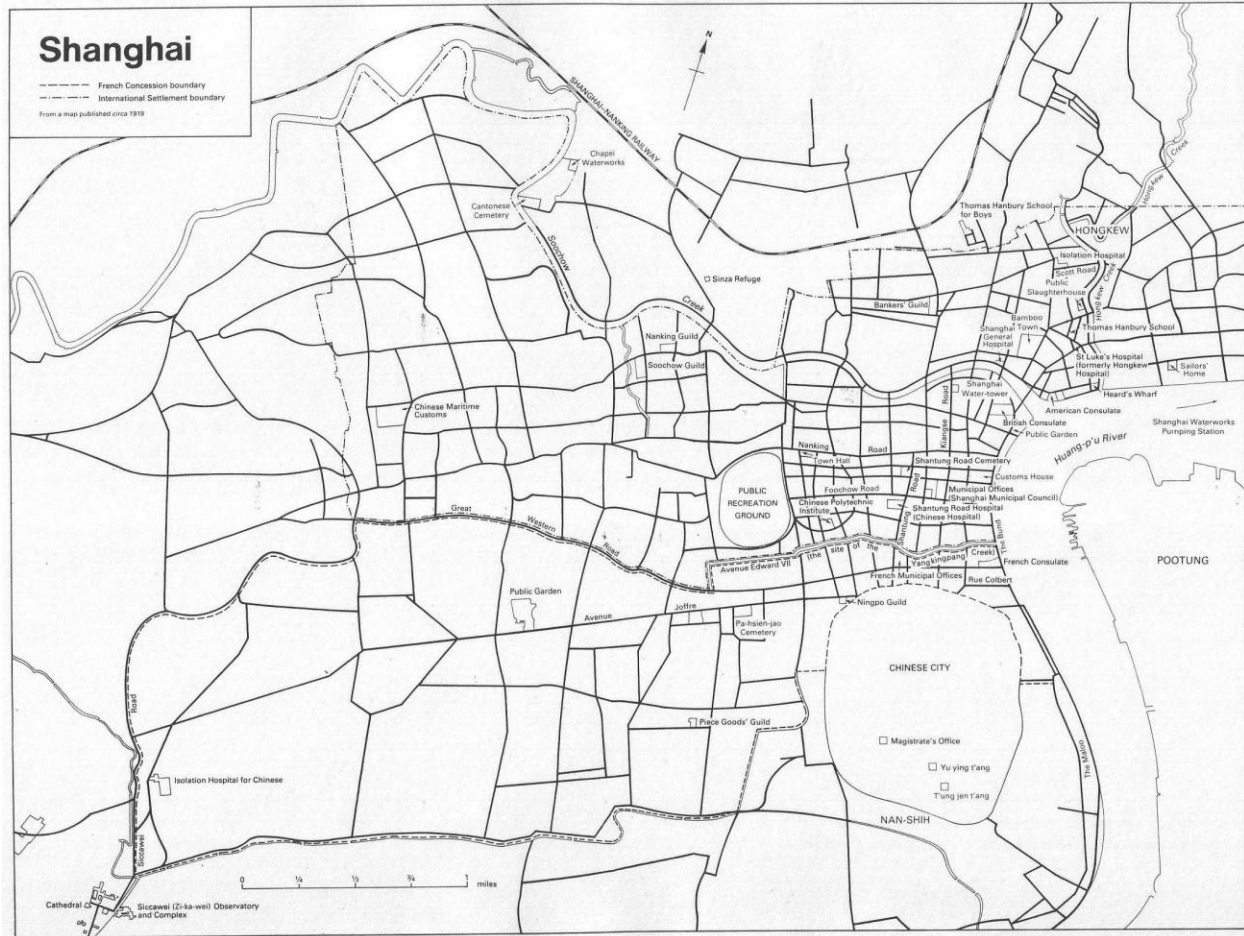


Figure 2.2: Boundaries between the International Settlement, French Concession and Chinese City (1918)

This map showed that the International Settlement and French Concession had far more roads than the Chinese city, even though the foreign territories only comprised a small portion of the entire city.

Source: MacPherson, Kerrie. *A Wilderness of Marshes: The Origins of Public Health in Shanghai, 1843-1943*. Lanham, MD: Lexington Books, 2002: p.ii-iii.

The Chinese City

The Chinese city remained fairly static throughout the second half of the 19th century. The only major substantial change to the city's layout was the location of the north gate being shifted in order to link up the main north-south road, known as Henan Road that crossed from the French Concession to the International Settlement. In this reconfiguration, the plan of the Chinese city slightly shifted to conform to the European patterns of linear design of major

streets. At the center of the Chinese city remained its government buildings. The magistrate's yamen was rebuilt after the Small Swords Rebellion, but the sub-prefecture's offices remained at their original locations inside the walled city. The City Temple remained a major site of importance, where the magistrate and other city officials continued to pay respects to each year. Confucian and Buddhist temples and shrines were common inside and outside of the walled city. In the late 19th century, commercial, handicraft manufacturing, and proto-industrial activities moved away to the suburbs.

Shanghai's population census showed that in 1852, there was a total population of 544,413 living in both the Chinese city and the concessions. All but a few hundred foreign residents were Chinese. By 1865, the population of Shanghai swelled to 691,919, largely due to Chinese migrants and refugees from the Small Swords Rebellion and the Taiping Rebellion. The population of Shanghai increased 27.10% in thirteen years.⁵³ Shanghai's population breakdown in 1865 is listed below:

Table 2.1

Total Population	International Settlement (%)	French Concession (%)	Chinese City & Suburbs (%)
691, 919	92,884 (13.42%)	~50,000 (7.23%)	549,035 (79.35%)

Almost 80% of the population still lived in the Chinese city and suburbs. While the International Settlement and French Concession made up slightly more than 20% of the population of Shanghai, 97% of the International Settlement and 99% of the French Concession were Chinese residents. Foreigners from all nationalities comprised less than 1% of the total population of Shanghai in the late 19th century.

⁵³ "Zhongguo Renko (Shanghai)", (China Population (Shanghai)) Zhongguo Caizheng Jingji Chubanshe, 1987: p. 47 in "Kuashiji de Zhongguo Renko (Shanghai Juan)", Zhongguo Tongji Chubanshe, Beijing, 1994: Table 1-1, p. 3.

The major distinction in urban planning in and around the Chinese city was between the city proper and the suburbs, which was separated by the city walls. The city's commercial activities mostly took place in the suburbs; where workshops, handicraft factories, boat yards and godowns operated. Residential areas were mixed; while many inhabitants who owned their own homes lived in the city proper, most rental housing was located in the suburbs to accommodate migrants and refugees from the Chinese countryside. There were significant differences in the public funding of the Chinese city and the foreign controlled territories. The Europeans began to tax their citizens on the basis of spatial use in the concessions. The Chinese continued to tax on an agricultural basis, with the taxes from the entire county supporting government services and development projects.⁵⁴

In terms of urban infrastructure, the Chinese city developed much later than the International Settlement and French Concession. In the foreign controlled territories, efforts to widen roads, install sewers, gas lines, and street lighting for electrification in order to reproduce the facilities of European cities began immediately. Funding came from tax revenues.⁵⁵ In the Chinese city lights were not installed on the main streets until 1873, and much of the city remained in darkness at night. During the late 1880s, Chinese authorities began to focus their development on the districts of Nanshi and Zhabei to prevent more foreign encroachment. Road construction followed the trends in the foreign controlled territories about one or two decades later. Due to limited funds, the construction of new roads put a lot of constraint on public revenue. Since population density was already quite high in Nanshi district, it would be impossible to evacuate all the residents and tear up the old roads to build new, wider roads.

⁵⁴ Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p.330-331.

⁵⁵ Cooke Johnson, Linda. *Shanghai: From Market Town to Treaty Port, 1074-1858*. Stanford: Stanford University Press, 1995: p.342.

Much of the new city construction consisted of linking existing roads together, and building smaller roads into residential areas in order to improve accessibility for the residents. Despite the late start, the Chinese districts of Nanshi and Zhabei learned from the urban planning methods and technologies used in the International Settlement and the French Concession. They were able to incorporate some of the foreigners' strategies to provide better accessibility and reduce congestion.

However, the financial discrepancies between the foreign controlled territories and the Chinese city was quite significant. The lack of funding from public revenues prevented the newly built roads in the Chinese zones to have the same quality as those built in the International Settlement and French Concession.⁵⁶ The end of the 19th century saw the dramatic transformation of the urban landscape of Shanghai in all three locations, as construction of new roads, buildings, homes, and other facilities greatly altered the physical makeup of the city. Better public transportation, more accessible roads, as well as streets and bridges that could link major roads to each other helped accommodate the growing population and helped facilitate the economic growth of the city.

Into the 20th Century

At the beginning of the 20th century, the International Settlement had witnessed rapid growth in population and size. The new changes to the Shanghai Land Regulations gave the settlement new territories to expand. The total size of the settlement grew to 33, 503 *mu* (~22.335 square km or 5,519.439 acres). The settlement was now more than 8.8 times larger than it was in 1854! In a population survey conducted in May 1900, the International Settlement had a

⁵⁶ Xiong Yuzhi, Zhou Wu and Er Dongqiang, eds. *Shanghai: Yizuo Xiandaihua Doushi De Biannian Shi*, (Shanghai: A Modern City's History), Shanghai: shudian chubanshe, 2007: p. 185-186.

total of 407,050 people, with 61,774 foreigners constituting 15.18% and 345,276 Chinese making up 84.82% of the population.⁵⁷

The arrival of the 20th century saw the expansion in population size and physical space of the foreign territories. Newspaper ads in the North China Daily began to display more information beyond buying or renting homes, or the services of banking and insurance firms. Advertisements toward providing services that catered to a more prosperous and even luxurious lifestyle became more common. Non-British companies began to place ads in the English speaking North China Daily News, since circulation of the newspaper extended to the entire Western ex-patriot community.

“Hatch, Mansfield & Co., Ltd. CHAMPAGNE: De Cremensay Et Cie. Monopoly for China and Hong Kong.

Grand Vin Vintage: 1898 Per doses bottles: \$42 Per 2 doses & bottles: \$44

Private Cuvee Vintage: 1898 Per doses Bottles: \$31 Per 2 doses & bottles: \$33

These two wines were brought directly from the producers in the Champagne Country. After repeated tastings, the De Cremenay has been classed with the Extra Quality of the Leading brands, quoted in China at \$55 per doz, and the Veuve Victoire with the First Quality of the same brands, quoted in China at \$42 per doz. Ilbert & Co., Agents, Shanghai, July 13, 1903.

“Open for Business: The New German Butchery & Sausage Factory. 1106 Broadway, Opposite Grand Oriental Hotel. Wilhelm Futterer, Proprietor.

Rolled Boiled Ham, especially prepared for this climate.

Smoked Ham, best quality. Bacon, only from young pigs, unsurpassed.

Lard, guaranteed doubled refined and absolutely pure.

Corned and Smoked Ox Tongues. Minced and Corned Pork and Beef.

Sausages, Liver, Ham, Pork, Cervelas, Vestphalish, Bologna, Tongue, Black Pudding, Vienna and Frankford Assorted Pastry. Delivery to any address free of charge.

Shanghai, October 26, 1903.”

“Just Unpacked, A lot of Axminsler and Brussels Carpets, Rugs, Artserges, Chinella and Tapestry Curtains, Stoves, etc. Vanel & Co.”

“K.A.J. Choterwall & Co. 1105 Broadway. Dealers in Silk, Embroidered Dresses, Sandalwood Silk, Embroidered Fans, and Coloured and White, Indian, Muslim Silk Velvet, Embroidered Table Covers, Borders, Cushions and Doyly’s. Best Rampooro,

⁵⁷ Xia, Dongyuan ed. *Shanghai Ershishiji Dabolan 1900-2000, (20th Century Shanghai 1900-2000)*. Shanghai: Wenya Chubanshe, 2001: p. 6.

Chadars and Kashmir Shawls, and a fresh lot of Ponjee Silk and Swatow drawn work. We have re-opened our store in front of the main entrance to the Astor House. Jan. 7, 1904.”⁵⁸

“Bosnian Regie Cigarettes. Pur Turkish Tobacco. Under control of the Austro-Hungarian Government. Fully equal to the best Egyptian Brands! A first rate at very modest cost! “Obmanli” (large size)...Price: \$2.00 per tin of 100. “Flor” (small size)...Price: \$1.50 per tin of 100. Fresh supplies always kept in Stock. Hugo Schwer & Co, Ltd., Sole Agents, 9A Hankow Road.”

“Hall, Holtz Limited, Tailoring Department. Just to hand. Summer suitings; flannels in all shades; blue, black and greys coatings for summer wear. Latest designs in trouserings, fancy vestings. Inspection solicited. May 17, 1904.”⁵⁹

As the urban infrastructure in the settlement became more modernized, and the expat community became wealthier, more expensive and upscale goods and services were found in the advertisements of *The North China Daily News*. New trendy shops opened up as businessmen and merchants seized the opportunity to satisfy the demands of a growing and more prosperous society. Westerners living in Shanghai had found that they could live in the East and still enjoy many of the benefits and lifestyles that had been available back home. For the adventurous foreigners, Shanghai seemed like a fun and happening place to be, either for short-term or long-term stay.

In 1911, China’s last imperial dynasty: the Qing fell from power. The Guomindang Party, under the leadership of Sun Yat-sen established a Republican government in China that would last for the next thirty eight years. During the last decades of the Qing, China had been plagued by internal strife, civil war, and famine. Compared to the rest of China, Shanghai had been relatively stable and well-off, even in the Chinese parts of the city. The attractiveness of Shanghai became more apparent when hundreds of thousands of rural peasants migrated to the outskirts of Shanghai fleeing famine, drought, or political turmoil in their home villages. Many

⁵⁸ *The North China Daily News*, January 23, 1904.

⁵⁹ *The North China Daily News*, May 26, 1904.

of these rural peasants come from neighboring Jiangsu province. The peasants from the northern part of Jiangsu came to be known as the “Subei” people. They took up work in Shanghai’s lowest paying and dirtiest jobs, and usually lived in the shack slums that made up the vast shantytowns in the city’s exterior. Native Shanghai residents looked down upon “Subei” people, and labeled them as inferior for their “inferior culture” and “low intelligence”, as their coarse language, poor personal hygiene, and dirty clothing made them stand out. The Subei migrants became more prevalent during the 1910s and 1920s as deteriorating conditions in their home province, as well as the prospect of earning far more money doing the low-paying, dirty work native Shanghai inhabitants did not want to allowed them to send money back home to their families in the rural villages. Most Subei migrants did not mind being exploited or doing the low-status jobs because any job in the city made far more than a rural peasant could.⁶⁰

Shanghai residents, who had been primarily descendants of the wealthier Jiangnan region looked down on Subei rural migrants, and considered these outsiders to be inferior. Shanghai historian Emily Honig noted that “to the extent that foreigners portrayed all Chinese as uncivilized and backward...Jiangnan natives may have more desperately than otherwise needed to create “an-other”.⁶¹ Native Chinese residents of Shanghai did not object to the arrival of masses of rural migrants. These rural migrants could do the cheap labor that the Shanghainese did not want to do. But even more than cheap laborers they could exploit, the masses of rural migrants allowed native Shanghai residents in the Chinese parts of the city to develop a sense of their own “superiority complex”.

⁶⁰ Honig, Emily. *Creating Chinese Ethnicity: Subei People in Shanghai, 1850-1980*. New Haven: Yale University Press, 1992.

⁶¹ Honig, Emily. *Creating Chinese Ethnicity: Subei People in Shanghai, 1850-1980*. New Haven: Yale University Press, 1992: p. 132.

While Chinese residents had been envious of the Western colonial elites that lived far better and enjoyed a much higher standard of living, they had been powerless to prevent Western territorial encroachment nor could the Chinese develop comparable economic or financial institutions that could match the foreigners' wealth. The arrival of rural Chinese migrants allowed native Shanghai residents to distinguish themselves from other Chinese. They were "superior" to the rural Chinese migrants because they had been born in Shanghai. Through their eyes, there were three classes of people in Shanghai: the foreigners at the top who had the political power and wealth to rule the foreign concessions; the native Shanghainese who were wealthier and more sophisticated than other Chinese living in interior provinces were in the middle; and the migrant Chinese, who had brought with them their backward and poor ways of life from the rural villages were at the bottom.

More construction and upgrades in the International Settlement continued into the 20th century. On May 8, 1913, new road extensions and widening were approved.

"Arrangements had been concluded with Mr. S.J. Solomon whereby compensation will be paid for two pieces of unregistered land north and south of East Hanbury Road, near the scheduled junction with the extension of Arthur Road, at the rate of Tls. 6,000 and Tls. 5000 per mow (*mu*) respectively, plus 10 per cent.

Kuling Road-The claim of Messrs, Davis & Thomas has been accepted for the surrender of this strip of Lot 99 required for the widening of this road for a the sum of Tls. 396 for an area of Mow. 0.066.

Shanhaikuan Road-The whole of this land for this extension having been approved.

Upon recommendation of the Engineer to make payment of a sum of Tls. 1,440 for, the removal of three groups of houses which at present prevent through access, and to make up and metal the road with a 12 foot strip of maesdam at a cost of Tls. 3,729.

Warren Road-It has been decided that the new road connecting the Hungjao and Brenan Roads which had been referred as the Fahua Road shall be renamed Warren Road. With respect to the triangular piece of land at the north end of the road, an offer of sale by the Chinese owner has been accepted at the rate of Tls. 400 per mow or Tls. 2,780 for Mow 6.951. This area will be turfed and laid out with paths and shrubberies in a similar manner to Brenan Road.

Permanent Paving-With respect to the programme of permanent paving work to be carried out this year for an appropriation of Tls. 35,000 was included in this budget. It

has been decided to proceed with the completion of Szechuan (Sichuan) Road south of the Maloo. The Engineer reports favourably upon the Lithofalt blocks at the Canton Road corner which under heavy traffic have shown no measurable sign of wear during a period of twelve months; at the same time certain blocks made locally of which a section adjoins the Lithofalt in Szechuan Road appear to be wearing satisfactorily while the laid down cost is below that of imported blocks. It has been decided, therefore to extend the strip of local blocks to the Foochow (Fuzhou) Road to lay an experimental section of 10,000 cork asphalt blocks, and to continue with the Lithofalt paving up to the Nanking (Nanjing) Road.

“Public Lighting: Chengtu (Chengdu) Road-Upon the recommendation of the Engineer, the lighting of the Chengtu Road in the section south of Weihaiwei Road will be carried out with eight 60 c.p. metallic filament lamps at an annual cost of Tls. 184.”⁶²

When decisions were made to rebuild or reconstruct roads and streets, the Shanghai Municipal Council paid the owners or firms that had resided on the land. Experienced engineers were assigned the tasks of the road extensions and widening. Notifications of decisions to build new roads or upgrade existing urban infrastructure were announced in the newspaper.

“Tenders for Public Works and Other Requirements: Conditions Governing Municipal Tenders. 1. The Council reserves to itself the right to accept the whole or part of any Tender. 2. The Council does not bind itself to accept the lowest or any tender or to pay any expenses which the tenderer may incur in tendering. 3. The contractor, whose tender is eventually accepted may be required to give satisfactory security for the performance of the contract. 4. The names of tenderers, with prices quoted will be published in the Municipal Gazette. 5. A fee may be charged for specification, to be returned upon receipt of a *bona fide* tender. 6. Tenders sealed and labeled on the outside to their contents should be forwarded, preferably by chit book or registered letter, to “The Secretary, Municipal Council, 23 Kiangese Road” not later than noon on the day fixed for their Receipt.”⁶³

The Municipal Gazette, which covered major news and transactions in the International Settlement posted the summary of foreign and Chinese properties and rental fees from 1911 to 1913:

⁶² Tls=taels. *The Municipal Gazette, Thursday, May 8, 1913*: p.116.

⁶³ *The Municipal Gazette, Thursday, May 8, 1913*.

Table 2.2

Summary of General Municipal Rate, Foreign, March Quarter

Year	1913		1912		1911	
	No. of House	Rental (Tis) Assessment	No. of House	Rental (Tis) Assessment	No. of House	Rental (Tis) Assessment
Central District	683	2,195,509	659	2,280,920	675	2,762,889
Northern	1,076	884,958	1,080	379,423	1,080	892,157
Eastern	618	771,568	612	791,780	598	784,294
Western	836	1,016,916	836	994,752	807	967,304
Outside Limits	403	261,727	384	241,416	401	264,348
Total	3,616	5,130,678	3,601	5,188,291	3,561	5,170,992

Tax Collected

Central	58,939	57,286	55,339
Northern	24,551	23,906	22,387
Eastern	21,099	20,693	19,438
Western	26,558	26,304	23,685
Outside Limits	3,280	3,253	3,124
Total	134,437	131,442	124,173

Table 2.2 Continued

Summary of General Municipal Rate, Chinese March Quarter

	1913		1912		1911	
	No. of House	Rental (Tis) Assessment	No. of House	Rental (Tis) Assessment	No. of House	Rental (Tis) Assessment
Central District	12,115	4,219,166	12,228	4,115,421	12,285	4,199,250
Northern	16,154	2,183,181	16,023	2,107,822	16,050	2,136,310
Eastern	13,633	1,005,011	13,409	965,676	13,313	959,656
Western	10,910	1,100,360	10,691	1,034,777	10,508	1,034,769
Outside Limited	1,035	86,812	3,566	323,188	4,366	385,266
Total	57,463	13,994,072	59,518	13,998,059	60,083	14,134,389

Tax Collected

Central		123,385		118,836		112,270
Northern		63,151		59,842		56,330
Eastern		28,077		26,442		24,900
Western		31,556		29,540		26,111
Outside Limits		1,245		1,973		5,329
Total		247,414		236,633		224,940 ⁶⁴

In British controlled International Settlement, most of the houses were rented out or leased to Chinese residents. Comparing the rental fees received for the total number of houses rented out, the foreigners lived in much more expensive homes than the Chinese. However, due to the overwhelming majority of the settlement's population being local Chinese, much more

⁶⁴ *The Municipal Gazette, Thursday, May 29, 1913.*

rental fees were collected from the Chinese residents than from foreigners. The Shanghai Municipal Council did not object to leasing or renting land to the Chinese, as long as the Chinese could afford the payments. Foreign real estate developers and businessmen were delighted to be able to profit from Chinese renters, many of whom were landlords in their rural villages and had brought money with them when they moved to Shanghai.

Westerners in the settlement began to advertise other previously considered “Western” items to Chinese clients and customers, as they sensed the small but increasingly prosperous Chinese population. The *North China Daily News* began to circulate among Chinese readers, some of whom wanted to learn English. This provided the English newspaper with a new population of subscribers.

“Weihaiwei School: An English School in British Territory. Preparation by experienced and qualified teachers for schools in England, or for commercial life in the East. School house with Recreations: Sea bathing, boating, cricket, football, etc. For terms, apply to the Headmaster. Herbert L. Beer”⁶⁵

English language schools for Chinese children became more popular, as the British wanted to use education as a venue to instill Western language and culture in Chinese youths from elite or wealthy families. Many well-to-do Chinese families eagerly sent their children to foreign owned English language schools because the facilities and quality of education was much better than local schools. St. John’s University (renamed 1905), originally founded by the Anglican missionaries in 1879 in Suzhou Creek as St. John’s College became the leading university in Shanghai. The language of instruction was in English, and St. John’s was considered to be the most prestigious and elite university in China. Many of the leading Chinese politicians, businessmen, and scholars sent their sons to the English-speaking Anglican university, which granted European equivalent bachelor’s degrees. Given the language

⁶⁵ *The North China Daily News*, June 6, 1913.

instruction and academic rigor of the university, many English language preparatory schools such as “Weihaiwei School” was set up to prepare the sons of Shanghai’s Chinese elites for admission to St. John’s University, and afterwards graduate or professional school in Britain or the United States.⁶⁶

By the 1910s, the *North China Daily* targeted their advertisements for expensive and luxury entertainment to foreigners and Chinese alike in the settlement. Examples included:

“Shakespeare Recitals-Marshall Darrach in Palace Hotel at 9:15 o’clock. Monday June 9: “The Comedy of Errors”. Wednesday, June 11: “Midsummer Night’s Dream”. Friday June 13: “Hamlet”. Course tickets (3 recitals)-\$5.00. Single tickets (1 recital)-\$3.00. Booking at Robinson’s Music Store.”

“Lyceum Theatre Shanghai. Last 2 Nights Only. To-Night! To-Night! The New Bandman Opera Co. Friday June 6-Important Revival with New Scenery. Costumes and Effects of Mr. George Edwards’ early Success. “The Geisha” from Daly’s Theatre. Saturday June 7, (The Last Night) “The Runaway Girl”. Doors open at 8:30. Commence at 9 sharp.”⁶⁷

House rentals and land leases continued to take up the advertisement sections of the *North China Daily News*, for everyone:

“House to Let. Loans of Mortgage of Real Estate. Apply Shanghai Real Estate Agency, No. 1 Sikang Road.”

“Land for Sale in the Western District. One lot, 11 Mow. One Lot, 4 Mow. Land Wanted Other Districts. Apply Newman & Co., Ltd. 64 Hong Kong Road. Telephone 918 3948.”⁶⁸

The Shanghai Municipal Council approved plans to build new residential buildings to accommodate the increasing number of Chinese settlers:

“Plans of New Buildings Approved.

Cad lot	Road	Applicant	Description
7255	Lahore	General Conference Corporation	2 houses

⁶⁶ Lamberton, Mary. *St John’s University, Shanghai: 1879–1951*. New York: United Board for Christian Colleges in China, 1955.

⁶⁷ *The North China Daily News*, June 6, 1913.

⁶⁸ *The North China Daily News*, June 6, 1913.

		of Seventh Day Adventists	
7070			2 houses and school
E of 7070			
2425	Yangtzepoo	B. J. Muller	Cotton Mill and Latrine
2645	BubbTing Well	Chinese	1 house
611	Kweichow, Ningpo and Yannan	Chinese	1 house
633	N. Honan	H. Lester	47 houses
807	Tiendong	Probst, Hanbury & Co.,Ld.	11 houses
N of 917	Carter	Chinese	3 houses ⁶⁹

“Plans of New Buildings Approved.”

Card lot	Road	Applicant	Description
939	Haining	Chinese	1 houses
N of 538	Broadway East	Chinese	5 Shed
No of 917	Carter	Chinese	5 houses
S. of 3030	Carter	Chinese	3 sheds
S of 4703	Macao	Chinese	13 houses
N of 1873	Chengtu	P. Tilley	6 houses & printing works
1090	Avenue	A. E. Algar	23 house & 1 gatehouse ⁷⁰

The Shanghai Municipal Council had no qualms about approving new buildings to be built for Chinese buyers as long as the Chinese could afford it. The increasing number of Chinese in the settlement brought new sources of business and profits for Western businessmen. Foreigners’ general attitudes toward the Chinese who migrated to the International Settlement was as long as they could afford to live there, and there were additional opportunities to do business with the Chinese, there were no problems with the Chinese living in the foreign concession.

⁶⁹ *The Municipal Gazette, Thursday, June 12, 1913.*

⁷⁰ *The Municipal Gazette, Thursday, July 17, 1913.*

Throughout the early 20th century, Shanghai's population in all three sections (International Settlement, French Concession, and Chinese City) skyrocketed. The population table below shows the trajectory of population increases from 1852 to 1931:

Table 2.3

1852-1931 Shanghai Population Statistics

Year	Chinese City	International Settlement	French Concession	Total City
1852	544,413			
1855		20,243		
1865		92,884	55,925	
1866	543,110			
1870		76,713		
1876		97,335		
1879			33,660	
1880		110,009		
1885		129,338		
1890		171,950	41,166	
1895		245,679	52,188	
1900		352,050	92,268	
1905		464,213	96,693	
1909	671,866			
1910		501,541	115,946	
1914	1,173.65			
1915		638,920	149,000	
1920		783,146	170,229	

		Table 2.3 Continued		
1925		840,226	297,072	
1927	1,503,922			
1928	1,516,090		358,453	
1929	1,620,187			
1930	1,702,130	1,007,868	434,807	3,144,805
	54.1% of Total	32.05% of Total	13.83% of Total	
1931	1,836,189	1,025,231	456,012	3,317,432
	55.35%	30.90%	13.75%	⁷¹

Shanghai's population had increased tenfold from 1852 to 1949. The percentage of the city's population residing in the Chinese section of the city had gradually dropped to slight over half. While the increasing number of foreign settlers contributed slightly to the rise in the population of the settlement and concession, the majority of the population increase came from rural migrant Chinese. The Chinese migrants often preferred living in the International Settlement or the French Concession because of better living conditions, more modern facilities, and more job opportunities.

Table 2.4

1865-1942 Percentage of Shanghai Residents by Area

Year	Chinese City	International Settlement	French Concession
1852-1853	99.91%	0.09%	
1865-1866	78.50%	13.40%	8.10%

⁷¹ *Shanghai Tongzhi*, (Shanghai Almanac), Volume #1. Shanghai: Renmin Chubanshe, Shanghai Academy of Social Sciences Publisher, 2005: p. 664-665.

		Table 2.4 Continued	
1909-1910	52.10%	38.90%	9.00%
1914-1915	58.50%	34.10%	7.40%
1925-1927	57.00%	31.80%	11.20%
1930	53.90%	32.20%	13.90%
1935	55.10%	31.40%	13.50%
1936	56.50%	31.00%	12.50%
1940-1942	37.80%	40.40%	21.80% ⁷²

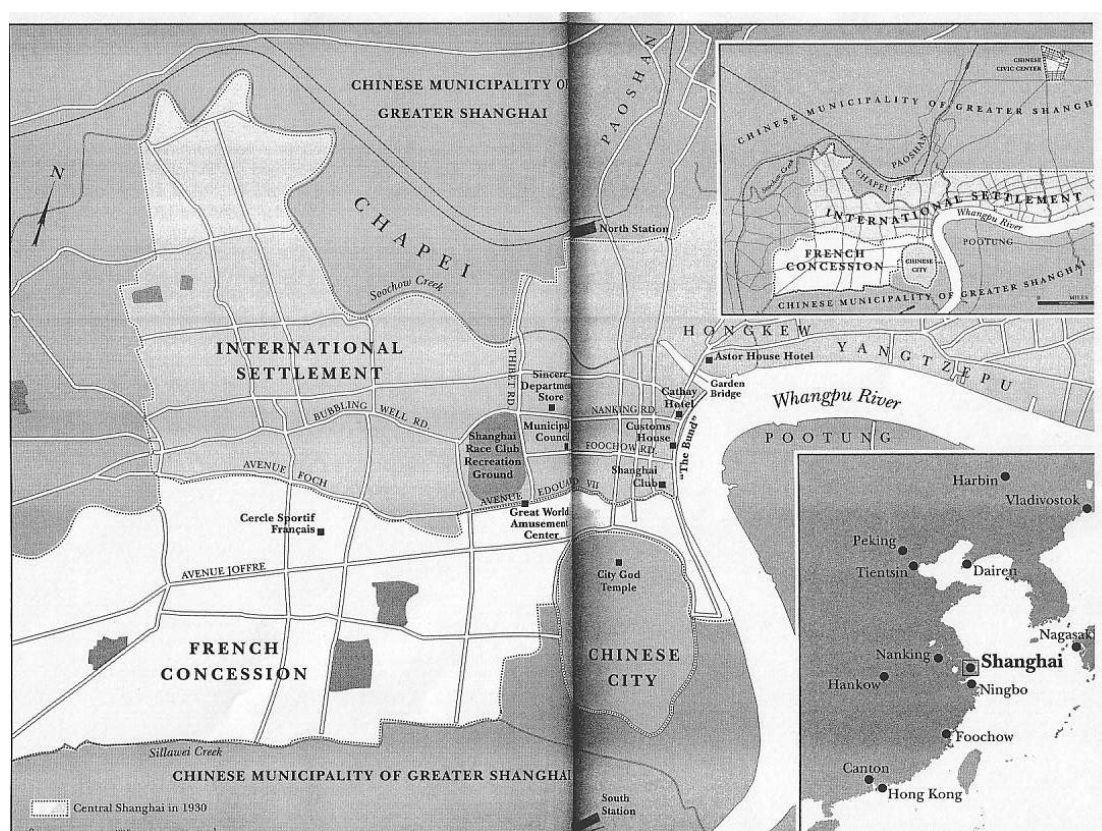


Figure 2.3: Central Shanghai (1930)

⁷² *Shanghai Tongzhi*, (Shanghai Almanac), Volume #1. Shanghai: Renmin Chubanshe, Shanghai Academy of Social Sciences Publisher, 2005: p.668.

This map showed the enlargement of the International Settlement and French Concession since the 19th century.

Source: Dong, Stella. *Shanghai 1842-1949: The Rise and Fall of a Decadent City*. New York: HarperCollins Publisher, 2000: p.xii-xiii.

Gradually over time, the Chinese city's share of the total population of Shanghai began to decrease, while the foreign territories' share of the population increased. The major reasons were the territorial expansions of both the International Settlement and the French Concession, where through a series of expansions, the geographic areas of the settlement and the concession became much larger than the original boundaries had dictated. Since the British controlled International Settlement had developed earlier, and was considered more "international", there were much more people of all nationalities that resided in the settlement than the French Concession. Better infrastructure, public transportation access, employment opportunities, as well as entertainment and leisure all contributed to the growing share of Shanghai's population moving toward the foreign controlled territories. During the early 1940s, due to the outbreak of World War II, many Chinese fled to the settlement and concession for safety and protection. By that time, the Chinese city had less than half of the city's total population, with the International Settlement being the most populous area.

Not all the Westerners who came to Shanghai were wealthy businessmen in search of adventures or oversea opportunities for commercial profit. Many Russians who flocked to Shanghai worked as prostitutes or beggars.⁷³ There was also a large Jewish contingent who fled anti-Semitism in Europe and settled in Shanghai. The Jewish population reached a peak during World War II, as tens of thousands of Jews landed in Shanghai fleeing the Nazi terror in continental Europe. It was estimated that over 20,000 European Jews from all nationalities lived in Shanghai during the late 1930s to the early 1940s. Jewish refugees found Shanghai's

⁷³ Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p.39.

International Settlement to be a welcoming place because given its status as an “international zone”, people from all nationalities were welcome there. No visa or passport was required for entry, and the settlement was a mixture of Western and Chinese culture and lifestyles. The thriving Jewish community in Shanghai grew prosperous as Jews built their own businesses, stores, and shops to cater to their own people. Some successful Jewish merchants such as the Sassoons and the Hardoons became the wealthiest families in Shanghai.⁷⁴

Compared to the rest of China, Shanghai provided much higher wages for its workers than any other city. Chinese migrants from other provinces were attracted to and sought out employment as laborers in Shanghai for the higher wages.

Table 2.5

Average Wages in Shanghai in 1930 (Chinese Workers)

City	Total Number of Workers	Men (\$)			Women (\$)		
		Max	Min	Most Freq.	Max	Min	Most Freq.
Shanghai	262,894	50	8	15.28	24	7	12.5
Canton	239,365	30	7.5	10.62			7.5
Hankow	168,992	41	8				
Wusih	70,685	30	7.77				
Soochow	58,814	35	7				
Shunteh	54,449	18.83	5				
Tsingtao	26,428	24	8				
Wuchang	23,974	30.25	9				

⁷⁴ Pan, Guang. *Youtai Ren Zai Shanghai* (Jews in Shanghai). Beijing: China Intercontinental Press, 2004.

			Table 2.5 Continued				
Nanking (Capital)	17,877	30	6.5	10.8			
Fushan	17,855	48.12	6.67	12.5			6
Wutsin	16,219	34	5.5	14	13.97	7.5	11.5
Hangchow	16,171	38	7.2	13.5			
Foochow	16,032	33	12				
Wuhu	15,835	35.6	4				
Nantung	12,627	35	6				
Ihing	12,570	43	7	13.5 ⁷⁵			

Shanghai had more workers and higher average monthly wages than all other Chinese cities. This “city of opportunity” inevitably drew migrants, laborers, rural villagers, landlords, and Chinese merchants from all over the country to Shanghai in search of a better life for themselves and their families.

Shanghai by the early 20th century had been called a city of extreme contrasts. Known throughout the world for her opulence and decadence, the city was called “Paris of the East”, “Sickman of Asia”, and “Emporium of China”. There were no income taxes, and visitors from all over the world came for short-term stay or for long-term permanent residence. All nationalities, races, ethnicities, religions, and lifestyles were represented in the city. Shanghai became a safe haven for both Chinese migrants fleeing poverty or famine in rural villages and for foreigners escaping from political tyranny or unrest in their home countries. After the Bolshevik Revolution, tens of thousands of Russians, and later in the 1930s, thousands of Jews found their

⁷⁵ *The China Year Book 1931*. H.G.W. Woodhead ed. Kraus Reprint: A Division of Kraus-Thomson Organization Limited. Nendeln/Liechtenstein, 1969: p. 505.

new home in Shanghai. Economic policies in Shanghai's International Settlement and French Concession followed a laissez faire system. The Shanghai Municipal Council and the French Municipal Council's primary responsibilities were to 1) administer justice and protection for all citizens living under their territory, 2) maintain a police force, and 3) undertake public works projects such as the construction of roads, traffic laws to ensure passenger safety, harbor patrol, and dredging the Huangpu River that connected Shanghai to the mouth of the Yangtze River.

Under limited government, low taxes, and economic laissez faire policies, Shanghai became the most prosperous city in East Asia. The standard of living, including that of Chinese residents in the Chinese administered city was by far the highest in China. Private and public colleges and universities that served both Westerners and Chinese came into existence during the early 20th century. Shanghai became China's leading center for higher learning with the establishment of both Chinese and foreign educational institutions, including St. John's University (British Anglican in 1879), Tongji University (German in 1907), National Chiao-tung (Jiaotong) University (Chinese government in 1896), and Fudan University (Chinese private in 1905).

Shanghai was a multi-faceted city. With growing prosperity and wealth came crime, prostitution, and drugs. Chinese gangsters such as the infamous Green Gang controlled and terrorized the Chinese population for extortion, racketeering, and drug dealing. Every socio-economic group existed in Shanghai, and each had their own ways of life. The "collision point of cultures" made possible by the multi-faceted nature of Shanghai's governance allowed for exchanges of new ideas, cultures, traditions, and lifestyles to take place in this vibrant and complex city.⁷⁶ In Nanjing Road, designated as the major commercial street in the International Settlement, a distinctive and modern Shanghai-style commercial culture, known as *haipai*

⁷⁶ Sargeant, Harriet. *Shanghai: Collision Point of Cultures, 1918-1939*. New York: Crown Publishers, Inc., 1990.

emerged in the 1930s. More and more wealthy Chinese customers began to frequent Western-style department stores to shop. The large number of stores had to compete with each other, and had to create new marketing tools and creative displays of their goods to attract increasingly picky Shanghai shoppers. The British American Tobacco Company only succeeded in tapping into Shanghai's Chinese customer market by translating English items and slogans into a local idiom portraying images from traditional Chinese artwork.⁷⁷ Shanghai-style came to be known as a merger or mixture of Western and Chinese commercial cultures. The most successful and profitable companies and stores produced the mingling of Western and Chinese cultures and symbols, with Western features in adaptations to Chinese customs. This process was described as "dubbing", where a foreign product is translated into a Chinese saying, or when foreign film is translated and shown to Chinese audiences with Chinese subtitles.⁷⁸ Western businessmen had discovered that to be successful in Shanghai's market, which had been overwhelmingly Chinese, Western products had to be modified or adjusted to fit the Chinese customers' preferences and tastes. Only by clever marketing that catered to the needs and tastes of the Chinese, could foreign products be welcomed and accepted by Chinese customers.

During the first half of the Guomindang Party's Republican era, provincial and regional warlords controlled much of China's interior. While the GMD had been established as the legitimate government of China, they had limited, if any control over many parts of the country. It wasn't until 1927, when Chiang Kai-shek took over the leadership of the GMD and defeated the regional warlords that the GMD would focus their attention to Shanghai. In July, 1927, Shanghai was created as a special municipality, and the Greater Shanghai Project was launched

⁷⁷ Cochran, Sherman. *Inventing Nanjing Road: Commercial Culture in Shanghai, 1900-1945*. Ithaca: Cornell University Press, 2000.

⁷⁸ Cochran, Sherman. *Inventing Nanjing Road: Commercial Culture in Shanghai, 1900-1945*. Ithaca: Cornell University Press, 2000: p.244.

under Mayor Huang Fu. The ten year plan to transform Shanghai ended in 1937 as the full fledged Japanese invasion of China derailed any further attempts to rebuild Shanghai.

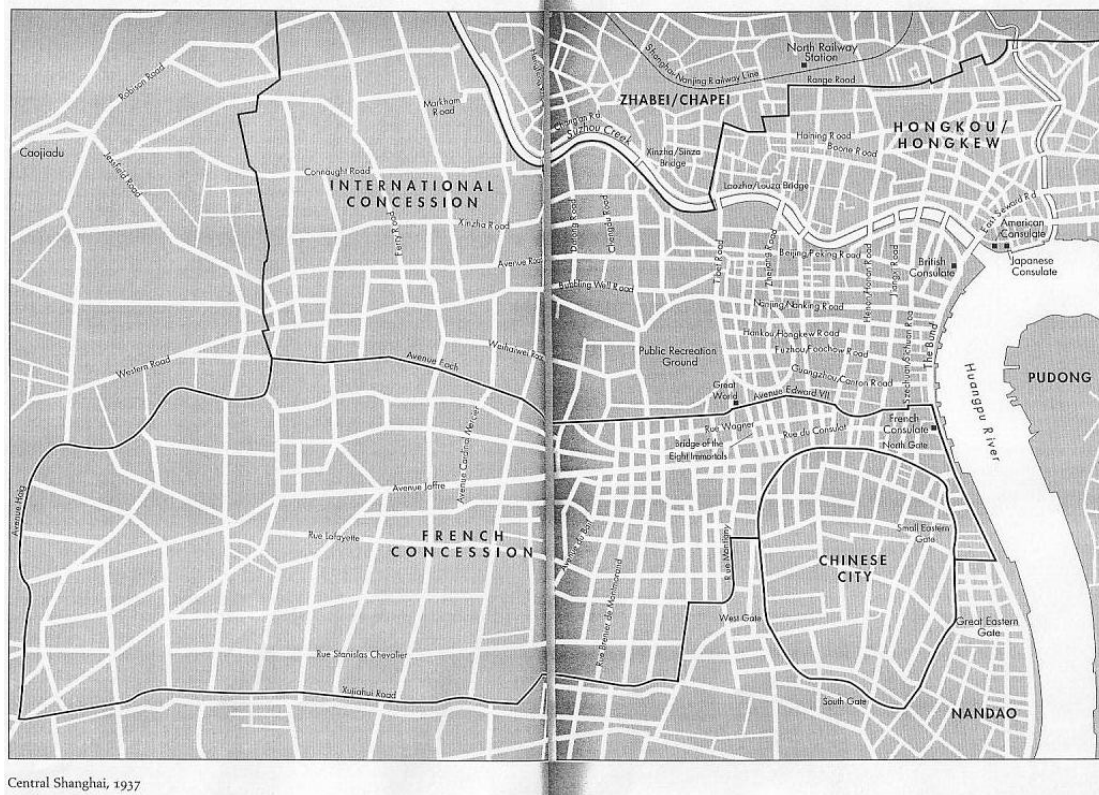


Figure 2.4: Shanghai (1937)

The Chinese areas of Nanshi in the south and Zhabei in the north were cut off by the French Concession and International Settlement, making transport and travel difficult.

Source: Wakeman, Frederic. *Policing Shanghai: 1927-1937*. Berkeley and Los Angeles: University of California Press, 1995: p.4-5.

By November 1937, Japanese forces had occupied the Chinese city of Shanghai. In December 1941, Japanese troops occupied the International Settlement, causing many foreigners to leave Shanghai. Since China had been a crucial ally of the Allied Forces in fighting the Japanese in World War II, the International Settlement was officially abolished by the Britain and the United States in January 1943, and control was given back to the Chinese government. Japan's unconditional surrender and the end of World War II formally restored the settlement back to Chinese sovereignty in September 1945. The French Concession was occupied by

Japanese forces in July 1943 until Japan's defeat in September 1945. However, the concession was not formally restored to China by France until February 1946. After the end of foreign occupation, the GMD and the Chinese Communist Party engaged in a bitter civil war for the control of all of China. The civil war lasted from 1945-1949, ending with Communist victory in 1949. Shanghai was "liberated" by the CCP in May 1949, and the new People's Republic of China was officially formed on October 1, 1949.⁷⁹

A critical question that can be asked is how did Shanghai manage to stay in one piece? How did such a diverse and divided city, governed under three different jurisdictions and settled by such an international population not split up into several different cities? What was it about Shanghai's collective identity that managed to tie people from different nationalities, ethnicities, and cultures together? To understand what held the city together for so long, it would be crucial to examine the role of middlemen and social networks that existed in Shanghai. Chinese middlemen, who benefitted and profited from serving as a link between the foreigners and the Chinese served critical roles through their complex and myriad of connections. These middlemen included Chinese government officials, businessmen and merchants, or educated Chinese who could speak English or French. They saw the need to help Shanghai as a divided city to function as a coherent whole. Through their social networks, both formal and informal, and through their contacts with foreigners and Chinese, they managed to bridge political, economic, and social boundaries through their networks that bound Shanghai together as one city.⁸⁰ Undoubtedly, many of these middlemen had huge stakes and personal interests to gain through their collaboration with both foreigners and Chinese. They saw profits to be made through business

⁷⁹ Xia, Dongyuan ed. *Shanghai ershishiji dabolan 1900-2000*, (20th Century Shanghai 1900-2000). Shanghai: Wenya Chubanshe, 2001.

⁸⁰ Dillon, Nora and Jean Oi (eds.) *At the Crossroads of Empire: Middlemen, Social Networks, and State-Building in Republican Shanghai*. Stanford: Stanford University Press, 2008.

deals and transactions, and they saw potential political power and influence. In their roles, they served as intermediaries between the foreigners that controlled the settlement and concession, and the rest of the Chinese population of the city.

In the International Settlement and French Concession, the Chinese population remained the overwhelming majority despite the increasing arrival of foreign settlers.

Table 2.6

1865-1942 International Settlement Population Statistics

Year	Chinese	% of Pop.	Foreign	% of Pop.	Total Pop.
1865	90,587	97.53%	2,297	2.47%	92,884
1870	75,047	97.83%	1,666	2.17%	76,713
1876	95,662	98.28%	1,673	1.72%	97,335
1880	107,812	98.00%	2,197	2.00%	110,009
1885	125,665	97.16%	3,673	2.84%	129,338
1890	168,129	97.78%	3,821	2.22%	171,950
1895	240,995	98.09%	4,684	1.91%	245,679
1900	345,276	98.08%	6,774	1.92%	352,050
1905	452,716	97.52%	11,497	2.48%	464,213
1910	488,035	97.30%	13,526	2.70%	501,561
1915	620,401	97.10%	18,519	2.90%	638,920
1920	759,839	97.02%	23,307	2.98%	783,146
1925	810,279	96.44%	29,947	3.56%	840,226
1930	971,397	96.38%	36,471	3.62%	1,007,868
1935	1,120,860	96.64%	38,915	3.36%	1,159,775
1936	1,141,727	96.68%	39,142	3.32%	1,180,969

			Table 2.6 Continued		
1937	1,178,880	96.74%	39,750	3.26%	1,218,630
1942	1,528,322	96.38%	57,351	3.62%	1,585,673 ⁸¹

The foreign percentage of the population in the settlement, which included all foreign nationalities increased very slightly from 1865-1942. At the peak, foreigners made up of less than 4% of the total population in the settlement.

In 1941, the Shanghai Municipal Council's Commissioner of Public Health released the population census for the entire foreign population of Shanghai, categorized by nationality and listed by their home location.

Table 2.7

Foreign population of Shanghai-1940

Country	International Settlement	French Concession	Total
Belgium	17	90	107
Brazil		6	6
Chile		4	4
Cuba		4	4
Estonia	60	50	110
Finland	7	13	20
Greece	150	150	300
Hungary	75	50	125
Iran	30	44	74

⁸¹ *Shanghai Zhujie Zhi* (Shanghai Foreign Concessions). Shi Meiding ed. Shanghai: Academy of Social Sciences Publisher, 1994: p. 116-117.

	Table 2.7 Continued		
Italy	275	310	585
Japan	29,730	1,030	30,760
Jewish Refugees	13,500	2,100	15,600
Mexico		17	17
Norway	135	85	220
Netherlands	91	115	206
Poland	500	250	750
Russia	5,000	12,881	17,881
Sweden	80	35	115
Switzerland	108	154	262
Latvia	100	100	200
Spain	117	187	304
Guatemala		4	4
Great Britain	5,645	4,733	10,378
Portugal	786	2,381	3,167
Denmark	200	200	400
France		2,513	2,513
Germany	1,319	698	2,017
USA	1,445	1,445	2,890
USSR	600	1,400	2,000
Total	59,970 (65.89%)	31,049 (34.11%)	91,019 ⁸²

⁸² "Foreign Population of Shanghai-1940". Population Census Report from Commissioner of Public Health, Shanghai Municipal Council: January 6, 1941. Shanghai Municipal Archives: U1-16-175.

According to this population census, almost two thirds of the foreign population resided in the International Settlement, with the remaining third in the French Concession. What is ironic is that in the International Settlement, the largest group of foreigners was not the British, but the Japanese by 1940. Japan had begun a series of invasions against China starting in 1931, with the takeover of Manchuria. The Japanese had bombed the Chinese districts of Zhabei and Jiangwan on January 28, 1932. By 1937, the entire Chinese city of Shanghai had been under Japanese control. The international settlement would be invaded in 1941, and the presence of Japanese military personnel in the city had persuaded many foreigners, including the British to abandon and evacuate from Shanghai. In the French Concession, where the Japanese would not invade until 1943, the Russians constituted the largest group of foreigners. While technically under French control, there were relatively few French citizens in Shanghai. Many of the Russians had been refugees fleeing the Bolshevik Revolution of 1917, or Stalin's purges during the 1930s. They had found a safe haven in the French Concession, where many of the Russian refugees were considered to be quite poor and worked at lower-status jobs alongside the Chinese.

Table 2.8

1865-1942 French Concession Population Statistics

Year	Chinese	% of Pop.	Foreign	% of Pop.	Total Pop.
1865	55,465	99.18%	460	0.82%	55,925
1879	33,353	99.09%	307	0.91%	33,660
1890	40,722	98.92%	444	1.08%	41,166
1895	51,758	99.18%	430	0.82%	52,188
1900	91,646	99.33%	622	0.67%	92,268
1905	96,132	99.14%	831	0.86%	96,963

			Table 2.8 Continued		
1910	114,470	98.73%	1,476	1.27%	115,946
1915	146,595	98.39%	2,405	1.61%	149,000
1920	166,667	97.91%	3,562	2.09%	170,229
1925	289,261	97.37%	7,811	2.63%	297,072
1928	348,076	97.11%	10,377	2.89%	358,453
1930	421,885	97.03%	12,922	2.97%	434,807
1931	440,866	96.68%	15,146	3.32%	456,012
1932	462,342	96.61%	16,210	3.39%	478,552
1933	478,755	96.42%	17,781	3.58%	496,536
1934	479,294	96.21%	18,899	3.79%	498,193
1936	454,231	95.10%	23,398	4.90%	477,629
1942	825,342	96.60%	29,038	3.40%	845,380 ⁸³

Just like the International Settlement, the percentage of the foreign population in the French Concession never surpassed 5% at its peak. The French Concession was smaller in area and developed a bit later than the International Settlement. Most of the migrants to the French Concession occurred during the first half of the 20th century. The sudden jump in the number of Chinese inhabitants after the Japanese invasion of Shanghai suggested that because the Chinese city had already been taken over, many Chinese residents fled to the French Concession for safety.

⁸³ *Shanghai Zhujie Zhi* (Shanghai Foreign Concessions). Shi Meiding ed. Shanghai: Academy of Social Sciences Publisher, 1994: p. 117-118.

In the latest population census based on nationality in the French Concession in 1936, the French comprised only a minority of the foreigners' population.

Table 2.9

1936 French Concession Foreigners Statistics

Nationality by Citizenship	Population	Pct (%)	Nationality by Citizenship	Population	Pct (%)
Total	23,398		Italy	199	0.9%
Great Britain	2,648	11.3%	Japan	437	1.9%
France	2,342	10.0%	Norway	71	0.3%
USA	1,791	7.7%	Poland	324	1.4%
Germany	821	3.5%	Portugal	500	2.1%
Austria	65	0.3%	Romania	49	0.2%
Belgium	105	0.4%	Russia	11,828	50.6%
Denmark	144	0.6%	Sweden	49	0.2%
Spain	142	0.6%	Switzerland	119	0.5%
Greece	104	0.4%	Annam (Vietnam)	738	3.2%
Netherlands	101	0.4%	Other	821	3.5% ⁸⁴

The population census in the French Concession showed that slightly over half of the foreign populations are Russians, and that the French only made up of 10% of the foreign populations within their own jurisdiction. Russian immigrants found the French Concession to be much more hospitable, and they opened up many Russian businesses along Avenue Joffre: the

⁸⁴ *Shanghai Zhujie Zhi* (Shanghai Foreign Concessions). Shi Meiding ed. Shanghai: Academy of Social Sciences Publisher, 1994: p. 115-116.

major commercial road in the French Concession.⁸⁵ The French were focusing more of their colonial attention in Asia to the Southeast Asia region of Indo-china. Many more French settlers migrated to the French colonies of Vietnam, Cambodia, and Laos than to the French Concession of Shanghai.⁸⁶

The questions of who really controlled Shanghai or to whom did Shanghai belong to have been critical issues in modern Chinese urban history. Shanghai can be seen as a semi-colony, where two sections of the city were conceded to foreigners as concession territories. Yet the number of foreigners from all nationalities living in Shanghai remained very small, even in the concessions. Within the foreign population, the British in the International Settlement and the French in their own concession represented a small percentage of the foreigners there. The largest foreign populations in Shanghai were not the British or the French, but the Japanese and Russians. In fact, foreign businessmen welcomed Chinese customers as they sensed new opportunities for business and profits. To become successful in Shanghai, foreign brands had to be modified or adapted to fit the local Chinese cultural customs and tastes.

While many foreigners who came to Shanghai were wealthy merchants, or had colonial political ambitions, many more were poor refugees themselves, fleeing from violence and political turmoil in their own countries. European Jews and Russians found Shanghai to be a safe haven to restart their lives free from discrimination or political oppression. Shanghai's foreign environment also allowed a small minority of Chinese elites to become wealthy, educated in Western schools, learn to speak foreign languages, and launch their own business, political, or academic careers by observing, learning, and following Western models. Shanghai was a melting

⁸⁵ Tu Shipin, *Shanghai chungku, xia*, 88-89 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century*. Berkeley, Los Angeles, London: University of California Press, 1999: p. 39.

⁸⁶ Cady, John. "The Beginnings of French Imperialism in the Pacific Orient." *The Journal of Modern History*, Vol. 14, No. 1 (March 1942), p. 71-87.

pot of nationalities, cultures, and ways of life. Most of the Chinese residents in the foreign settlement and concessions had little contact with foreigners, and lived their lives just like they had before. Most foreigners living in Shanghai were sheltered from the conditions in the Chinese city or other parts of China. By the early 20th century, Shanghai's concessions provided much of the material comforts and luxury items that had been available in major European cities. The Japanese invasion of Shanghai sent a rude awakening to European powers that Japan was a powerful and militaristic nation with imperialistic ambitions. The Japanese takeover of the foreign controlled territories and the ensuing World War II in the Pacific forever changed the Europeans' vision of Shanghai as their Chinese colony. China's status as an ally of the Allied forces convinced the British and the French to return their concession territories back to China. The defeat of the GMD by the Chinese Communists resulted in a unified China under the rule of the People's Republic in 1949.

Shanghai from the mid-19th to the mid-20th century belonged to everyone and anyone. Every person regardless of national citizenship, religion, language, culture, socioeconomic status, or occupation could find a home and a niche somewhere in Shanghai. Shanghai during that period of time also belonged to no one. No one had full control of the city, and no single government could dictate laws or policies for all of the city's population. A divided city governed by three different jurisdictions was bound together through mutual needs and benefits, as middlemen utilized their social networks to hold the city together as one. A distinctive Shanghai-style of culture known as *haipai* was created as the Shanghai identity. *Haipai* combined Western and Chinese elements and merged them together to bring out a distinctively Shanghainese flavor.

Urban infrastructure, particularly public transportation systems were crucial in Shanghai's growth and development. Under Shanghai's complicated and unique environment, the old and the new, primitive and modern, foreign and native, continuity and change, as well as rich and poor could co-exist together side-by-side for nearly a century. As a city full of contrasts; and as a city that belonged to everyone yet belonged to no one; everything and anything could happen, everyone and anyone could find their niche, and every form of public transportation would find their clientele.

Chapter 3

Traditional and Foreign: Man-Powered Vehicles

Prior to the 20th century, transport vehicles that moved along Shanghai's roads were man-powered, or pulled by human muscle. Some of these man-powered vehicles were traditional Chinese inventions that had been used for thousands of years, while others were foreign imports that arrived in China during the mid-19th century. Foreign imports were reshaped and modified from their original uses to better accommodate with Shanghai's terrain. In understanding the transformation of Shanghai's urban landscape, two questions regarding the role of these man-powered vehicles come into mind. First, why were these traditional forms of man-powered vehicles so effective and useful for so long? What are the distinctive advantages of these modes of transportation? Second, why were these more "primitive" forms of vehicles able to coexist with modern motorized machine-powered vehicles that would arrive in Shanghai during the early 20th century? Why weren't these man-powered vehicles completely phased out or replaced by more modern and efficient forms of public transport? In order to understand the importance of man-powered vehicles, it is crucial to realize both their specific purposes and Shanghai's geographic and environmental landscape. Each form of man-powered vehicle had served a different function in moving people around, and each vehicle catered to different types of passengers.

Compared to the cities in the West, Shanghai's streets were much narrower. The average width of Shanghai's streets prior to the arrival of Europeans had been around 6 *chi* (~2.229 meters).⁸⁷ Besides being much narrower, Shanghai's streets are typically long and winding alleyways that connected into people's residential compounds. The narrow and winding characteristics of these streets allowed smaller, more nimble vehicles to be more effective in transporting people and goods from place to place.

⁸⁷ Xiong Yuzhi, Zhou Wu and Er Dongqiang, eds. *Shanghai: Yizuo Xiandaihua Doushi De Biannian Shi*, (Shanghai: A Modern City's History), Shanghai: Shudian Chubanshe, 2007: p.180.

The Wheelbarrow

According to Joseph Needham, the wheelbarrow was invented in China as early as the 1st century B.C., and this one wheeled, man-powered cart became an efficient and long lasting transportation tool until the early 20th century.⁸⁸ Needham pointed to evidence found during the late Qin-early Han dynasties from the Jiangsu Provincial Archaeological Survey that had published a frieze relief from a tomb-shrine near present day Suzhou at around 100 B.C., which showed a wheelbarrow very clearly with a man sitting on top of it.⁸⁹ So how did the wheelbarrow, which Europeans had thought of as being very ill adapted to carrying heavy weights become such a popular transportation tool in China? The Chinese wheelbarrow had become such a useful form of transportation that as many as six people could ride on top of it at the same time. During the late 18th century, when European travelers had discovered this ancient Chinese invention, they were amazed at both its simplicity and effectiveness.

A Dutch merchant trader Andreas Everardus Van Braam Houckgeest who had been living in China wrote in 1797:

“The sight of this wheelbarrow was entirely new to me. It was singularly constructed and was employed for conveyance of persons and goods. The wheel, which is very large in proportion to the barrow, is placed in the center of the part on which the load is laid, so that the whole weight bears upon the axle, and the barrow men support no part of it, but serve merely to move it forward and keep it in equilibrium. The wheel is as it were cased up in a frame made of laths, and covered over with a thin plank, four or five inches wide. On each side of the barrow is a projection, on which the goods can be put, or which serves as a seat for passengers. A Chinese traveler sits on one side, and counterbalances his baggage by placing it on the other. If the baggage is heavier than him, then it is balanced equally on two sides, and he seats himself on the board over the wheel, the

⁸⁸ Lewis, M.J.T. “The Origins of the Wheelbarrow,” *Technology and Culture*, Vol. 35, No. 3(July 1994): p.453.

⁸⁹ Liu, Hsien-Chou and Shih Shu Chhing in *Wen Wu*, 1964 (no.6), pp. 1-6. *Chiangsu Hsueh-han Hua Hsiang Shih* (Kho-Hsueh, Peking, 1959): pl.14, fig. 14.

barrow being purposely contrived to suit such occasions. I am convinced that the Chinese wheel is best suited to a clayey soil.”⁹⁰

The biggest advantage of the wheelbarrow had been that both people and their baggage could sit on top of it at the same time, and the counter-balance structure of the barrow could allow heavy cargo and people to stay in equilibrium as the wheelbarrow moved along the road. Needham noted that the Chinese wheelbarrow had pre-existed a similar European invention by over 1,000 years. The earliest form of a European wheelbarrow did not exist until the late 12th or early 13th century. Unlike the Chinese, the wheelbarrows of Europe were not designed to transport people. Instead, it was designed to haul small loads of concrete and bricks to build castles and cathedrals by substituting the wheel for the front man of the hod or stretcher.

While the wheelbarrow was invented in China as early as the late Qin or early Han periods, it was modified and upgraded during the 3rd century during the Three Warring Kingdoms. Zhuge Liang, the famous general of the Kingdom of Shu used this device to transport supplies for his armies. He designed the wheelbarrow to resemble that of the ‘Wooden Ox’ and the ‘Gliding Horse’. The ‘Wooden Ox’ had a square belly and a curved head, one foot and four legs, with its head compressed into its neck and its tongue attached to its belly. This ‘Wooden Ox’ wheelbarrow could carry many things at once, and took fewer journeys to transport, so it was employed specifically for long journeys covering large distances. It was estimated that the time taken by a man to go six feet, the ‘Wooden Ox’ would be able to go twenty feet, or more than three times as far. It could carry the food supply of one man for a whole entire year, and

⁹⁰ Needham, Joseph. *Science and Civilisation in China*, vol.4, *Physics and Physical Technology*, pt.2, *Mechanical Engineering*. Cambridge University Press, 1965: p.259.

even after traveling long distances the porter would not feel tired.⁹¹ This would prove to be especially important for the Kingdom of Shu in feeding and supplying its soldiers in their wars against the Kingdom of Wei.

The “Wooden Ox” and the “Gliding Horse” models used during Zhuge Liang’s times were very similar to the wheelbarrow used during the late Qing. The “Wooden Ox” closely resembled the small barrow (*xiao che*) of the late 19th century, as this vehicle was called because it had the shafts projecting in front of it so that it could be pulled. The “Gliding Horse” was the same kind of wheelbarrow which had been pushed by a single person with the shafts projecting from behind. Later, it was named “Chiangchow Barrows” after the city of Chiangchow in Sichuan province where Liu Pei (the emperor of the Kingdom of Shu) had reigned, and where Zhuge Liang’s original invention had been made. Kao Chheng, a scholar during the 11th century commented that the “Wooden Ox” and the “Gliding Horse” differed in that the former had shafts pointing forward and the latter had them pointing backwards. The former invention was thought to have copied the shaft-chariot, but both models were essentially economical, in that it was more convenient to use small handcarts with two wheels and shafts, for human traction.⁹²

Regional differences in geographic terrain caused the evolution of the Chinese wheelbarrow to digress across different provinces. Each type of wheelbarrow was designed and utilized to maximize transportation convenience in the specific type of land it encountered. There were several regional variations of the wheelbarrow including the Jiangxi wheel being the “pack-horse” type featuring a wheel central with housing, and taking all the load as a substitute for a pack animal. The northern Sichuan model had wagon sides and was influenced by the

⁹¹ Needham, Joseph. *Science and Civilisation in China*, vol.4, *Physics and Physical Technology*, pt.2, *Mechanical Engineering*. Cambridge University Press, 1965: p.260.

⁹² Needham, Joseph. *Science and Civilisation in China*, vol.4, *Physics and Physical Technology*, pt.2, *Mechanical Engineering*. Cambridge University Press, 1965: p.261.

presumptive design of Zhuge Liang during the 3rd century. Wheel central but with higher center of gravity, with housing, and having axle on sloping struts with flat-car sides was used for moving earth in Shanxi province. One or two small wheels forward, high center of gravity, axle on vertical stayed struts and with stayed support appeared in Sichuan. Wheels far forward with rectangular housing, having straight frame, and looking like the “half-stretcher” type appeared in Shanxi and many other provinces throughout North China. In western Sichuan, the intermediate type with curving frame and curving housing or streamlined housing was very popular. A small auxiliary wheel at the forward end of the frame, useful for cleaning obstacles was widely used in Hunan and neighboring provinces.⁹³

The modern Chinese wheelbarrow used during the late 19th to early 20th centuries was characterized as having a large wheel centrally mounted, the load being carried pannier-fashion on either side, or even on top. The operator had to propel or guide it but do not have to significantly lift the barrow. As a result, a substantial load of people or goods could be carried.⁹⁴ While the Chinese wheelbarrow had indeed appeared earlier than it had in Europe, it may have been possible that the modern wheelbarrow used in China could have in fact been influenced by the European chariot.⁹⁵ There is a possibility that the chariot wheels used in classical Greece or ancient Rome might have been forgotten in the West until it was rediscovered later on, and that his idea could have passed on to China. The ancient Chinese wheelbarrow technique such as the “pack-horse” could have been transmitted to Europe in the 13th century, while later Western influences could have reshaped the contemporary Chinese designs such as the

⁹³ Needham, Joseph. *Science and Civilisation in China*, vol.4, *Physics and Physical Technology*, pt.2, *Mechanical Engineering*. Cambridge University Press, 1965: p.270.

⁹⁴ Lewis, M.J.T. “The Origins of the Wheelbarrow,” *Technology and Culture*, Vol. 35, No. 3(July 1994): p.453.

⁹⁵ Lewis, M.J.T. “The South-pointing Chariot in Rome: Gearing in China and the West,” *History of Technology* 14 (1992): 77-99.

“half-stretcher” types.⁹⁶ While it is unclear whether or exactly how much foreign influence may have had on the modern Chinese wheelbarrow, this design had existed for around 2,000 years and had been the most effective transportation device for people and goods throughout China.



Figure 3.1: Wheelbarrow (1908)

This picture showed that multiple people could sit on both sides on the wheelbarrow.

Source: Xue, Liyong (editor). *Qiu Shanghai Zhujie Shenghuo* (Old Shanghai Concession Lifestyles). Shanghai: Shanghai Shehui Kexueyuan Chuban She, 2002: p. 118.

In Shanghai, like everywhere else in China, the wheelbarrow remained common all-purpose vehicles since its mechanical design was particularly suitable to the city. Shanghai's roads had been served only as a path for local residents, and not for vehicular traffic. Even after

⁹⁶ Needham, Joseph. *Science and Civilisation in China*, vol.4, *Physics and Physical Technology*, pt.2, *Mechanical Engineering*. Cambridge University Press, 1965: p.271.

the introduction of automobiles into the city in the early 20th century, wheelbarrows remained very popular because they could navigate the narrow streets and move into the winding alleyways that cars could not. The biggest advantage of the wheelbarrow was its small and nimble feature that could allow it to make headway into street corners no matter how heavy the ongoing traffic is. Another distinctive trait of the wheelbarrow was that only one person was needed to operate it, yet it could carry safely as much as 600 pounds of supplies. From the 1860s to the 1930s, the wheelbarrow was a common sight in transporting goods and carrying passengers. Even up into the Republican period the wheelbarrow was continuously used in both the foreign concessions and in the old Chinese city. People of all socioeconomic backgrounds from the working class to the merchants used the wheelbarrow as a method of public transportation.

The popularity of the wheelbarrow and its common acceptance by all social classes could be explained by its convenience where as many as eight passengers could ride on the wheelbarrow at the same time. Group travel allowed passengers to talk to each other in a conservative society that still emphasized the separation of the opposite sex. However, as other forms of public transportation became more prevalent, the status of the wheelbarrow was lowered to that of the lowly “fourth class”. This designation indicated the gradual segregation of the social classes according to how one traveled in public. The wealthiest would ride in the automobiles (first class), next came the rickshaws (second class), and then came the tram (third class).⁹⁷

The wheelbarrow was called *dulunche* in Chinese, meaning “single wheeled mobile”. Its popularity reached a peak during the era of Emperor Guangxu of the late Qing (1875-1908)

⁹⁷ Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p.303-306.

because of its durability and affordability. Since multiple passengers could ride on it, the average fare for one *li* (about 500 meters) was only 5-6 cents. For transporting cargo, the *dulunche* fare was about 10 cents for about 450 *jin* (1 *jin* =500 grams) for each *li*. For lighter cargo, the fare was about 8 cents for one *li*. But as Shanghai's streets became more crowded, certain sections of the city barred the wheelbarrow during the busy hours of the day. In the early 20th century, Nanjing Road (the busiest commercial street in Shanghai) banned the wheelbarrow from 8 am in the morning to 8 pm in the evening. But by the 1930s, the wheelbarrow was gradually being replaced by other methods of transportation, most notably the rickshaw. In 1932, the Chinese section of the city still had around 15,700 registered wheelbarrows. However, in the foreign concessions, there were only about 8,000 wheelbarrows still in use.⁹⁸ The wheelbarrow, being such a simple yet convenient transportation for 2,000 years was finally being phased out at the end of the 1930s.

Why did the wheelbarrow become obsolete? As other more advanced forms of transportation were being developed and introduced, the wheelbarrow became a symbol of China's backwardness and reflected the low social status of its riders. Due to its primitive state as well as its cheap fare and ability to carry multiple passengers, the wheelbarrow was seen as a vehicle for the poor. After causing accidents and contributing to the congested traffic, the wheelbarrow was barred from traveling on Shanghai's main roads or in major commercial areas. While it still operated in many small streets and alleyways of the Chinese city until the 1930s, the wealthier foreign concessions turned to more modern vehicles of transportation: both man-powered and machine-powered. The GMD would phase out the last wheelbarrows in the Chinese city toward the end of the 1930s as part of their modernization campaign. Nevertheless, the

⁹⁸ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p. 10-11.

wheelbarrow left a lasting legacy in the history of public transportation in China for two millennia due to its efficiency, low-cost, and durability.

The Sedan Chair

Another ancient form of transport that had survived until modern times was the sedan chair, known in Chinese as *qiaoche*. The sedan chair does not have wheels and is carried by manpower. It first appeared during the Qin dynasty where the imperial royalty sat inside a box-like cart covered by cloth to shield them from the sun. A sedan chair is placed inside the box-like cart and has two long bamboo poles attached to either end of the cart where their subjects can carry it over their shoulders. The *qiaoche* became a symbol of power and wealth, as the royalty and other prominent officials displayed their status publicly by riding inside the cart, with a veil covering the two sides where doors normally would be to prevent outsiders from seeing them in person. From the Han dynasty up until the Qing, the imperial court made the *qiaoche* an essential part of their royal experience as they traveled from place to place.⁹⁹

The sedan chair publicly displayed the master-servant relationship between the royalty and the people they ruled over. The royalty sat inside, safely shielded from the weather and from being seen by others. They are carried by four laborers who must not only toil with their muscle and sweat, but also deal with the natural elements such as the rain, heat, and cold. The laborers who carried the bamboo poles attached to the sedan chair are seen publicly as carrying a very important person, whether it was the sovereign emperor or a member of the royal family. This reiterates the superiority of the imperial royalty and the inferiority of the common people they ruled over. It took four laborers to carry one member of the royalty, with two carriers in the front and two in the back, while the royalty is seated inside the protected cart in the middle. From a

⁹⁹ Wang, Zhonghuan. *Zhongguo Guodai Jiaotong* (Ancient Chinese Transportation). Beijing: Shangwu Yinshuguan, 1996: p. 75-77.

symbolic interpretation, this suggested that the royalty was at the center or heart of the nation, while the commoners labored in the outer peripheral sides to protect the imperial sovereignty. By publicly submitting to the royalty's domination, the sedan chair justified the status differences between the royalty and the common people (*laobaixing*) and through these public displays of submission the laborers indicated the legitimacy of the rule of their imperial sovereignty.

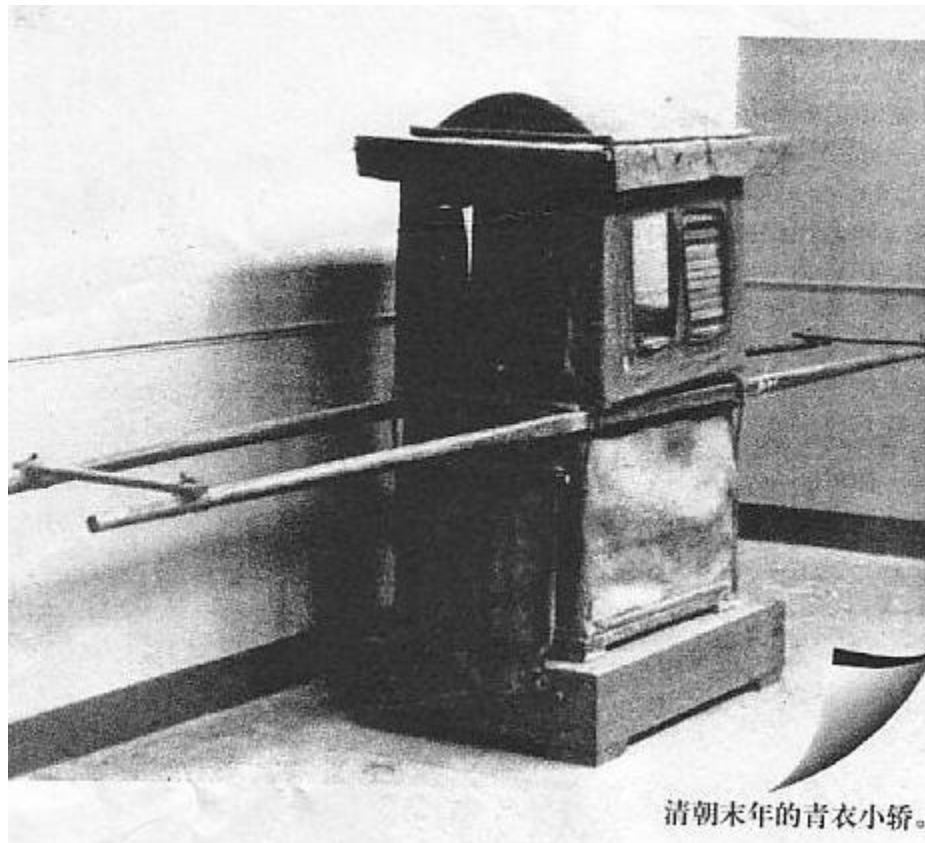


Figure 3.2: Sedan Chair During the Late Qing Dynasty

The sedan chair offered the passenger privacy and comfort, and signaled the master-servants relationship as four laborers (two in front and two in back) were needed to carry the two long bamboo poles.

Source: Wang, Liqun. *Shanghai Shi Lunzi Zhuan Chulai De* (The Wheels of Shanghai). Shanghai: Xuelin Chuban She, 1999.

The sedan chair is often contrasted with the wheelbarrow to highlight the huge differences in the social statuses and class origins of the passengers who used these two very different types of vehicles. While the wheelbarrow was used by the common folk, most notably the poor, the sedan chair catered specifically to the wealthy and powerful. Like the wheelbarrow,

the sedan chair was particularly effective in navigating the streets of Shanghai. During the mid 19th century, not only did officials but also wealthy families used private sedan chairs and personal carriers to take them from place to place. There were public sedan chairs available for rent in the number of stations (*jiaohang*) where carriers could be called on to lift the passenger into the box-cart. After Shanghai was opened up to the West, sedan chairs became very popular and had to be officially registered so they could be taxed. During the reign of Emperor Tongzhi (1862-1874), sedan chairs were in big demand in the foreign territories, especially for special occasions such as holiday festivals, weddings, or funerals. But by the early 20th century, as rickshaws became more commonly used, the sedan chair began to decline in numbers. Whereas in 1905, there were 733 sedan chairs registered for use in the International Settlement, by 1911 that number dropped to only 199.¹⁰⁰ Eventually, the sedan chair no longer became a regular transportation tool, but rather a wedding ritual where the bride would be carried in the sedan chair to her husband's home. During the 1930s, it cost 20 silver dollars to rent a sedan chair for a wedding; or about the entire monthly income of an average worker while a taxi ride only cost about 4-5 dollars.¹⁰¹

While they carried very different types of passengers, the wheelbarrow and the sedan chair shared similarities in that they were both native Chinese inventions that had a long-lasting tradition spanning nearly 2,000 years, were both extremely effective in navigating urban streets and alleyways, and saw their demise during the early 20th century as rickshaws appeared in large numbers in Shanghai. The wheelbarrow and the sedan chair served as contrasting foils for each other; which highlighted the inequality of Chinese society and the vast differences in economic

¹⁰⁰ Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999, p.302-303.

¹⁰¹ Tang, Weikang and Du Li. *Hucheng fengsu ji*, p.99 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999, p.303.

status and social prestige that existed throughout history in China. Yet they both lost their roles as the primary methods of transportation when foreign inventions, most notably the rickshaw were introduced into Shanghai. In some ways, the wheelbarrow and the sedan chair symbolically represented the distinctive aspects of the Chinese cultural identity in the face of inevitable foreign influences.

The Horse Drawn Carriage

Not all man-powered vehicles are native Chinese inventions. Unlike the wheelbarrow or the sedan chair, the horse drawn carriage (*mache*) was introduced to Shanghai in 1853 by an Englishman named Smith who had arrived in the British Settlement. Smith thought that these carriages which had been common in British cities, would be useful in China as well.¹⁰² The horse drawn carriage served two functions: to pull heavy objects and to pull passengers. In order to pull heavy objects, a large box-shaped container was placed on four wheels, filled with cargo, and was attached to the horse with a jockey riding on the horse. For passengers, a mounted chair on four wheels is attached to the horse, where the puller will sit on the back of the mounted chair with the passengers. While the horse carriage was quite popular in the early 20th century, it gradually lost its share of the transportation market as cargo companies and passengers began to choose other lighter forms of vehicles. The horse drawn carriage had major drawbacks that limited its effectiveness such as the slow speed it can go, the smell of horse manure on the streets it had passed, and its inability to navigate through Shanghai's narrow streets. The horse drawn carriage was used primarily on main streets with wide lanes. The high maintenance costs, ineffectiveness to move in and out of small crowded streets, and complaints from residents and

¹⁰² Xiong, Yuezhi, Zhou, Wu, Er, Dongqiang editors. *Shanghai: Yizuo Xiandaihua Doushi de Biannian Shi*. Shanghai Bookstore Publishing House, 2007, p.96-97.

businesses about the horse manure all contributed to its eventual demise in the mid-20th century.

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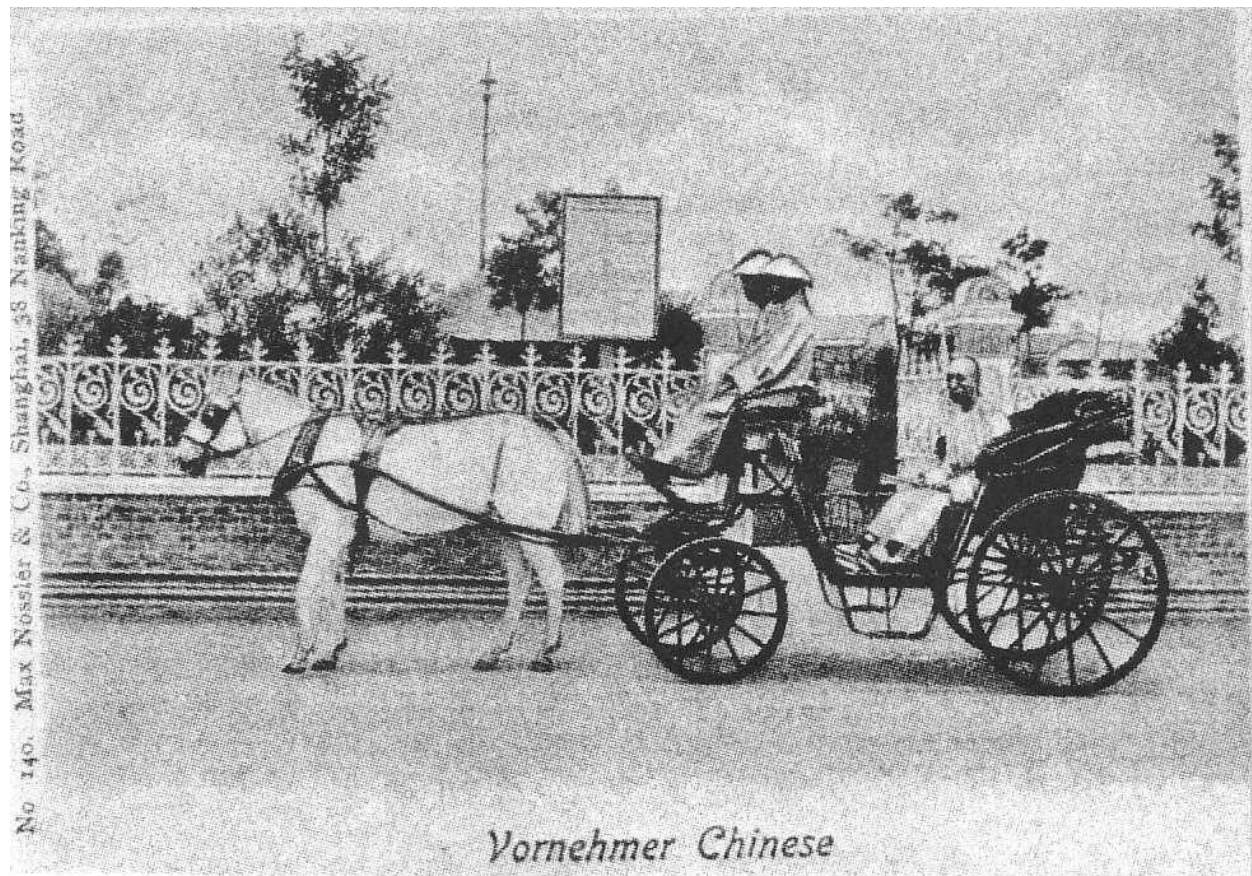


Figure 3.3: Horse-drawn carriage (1905)

Horse-drawn carriages could carry both people and goods. It was especially useful to carry large amounts of heavy cargo, but complaints over horse manure and accidents caused the horse-drawn carriages to be phased out.

Source: Xue, Liyong (editor). *Qiu Shanghai Zhujie Shenghuo* (Old Shanghai Concession Lifestyles). Shanghai: Shanghai Shehui Kexueyuan Chubanshe, 2002: p. 119.

From 1905-1930, the horse drawn carriages reached a peak of usage for both commercial use and private ownership.

¹⁰³ Shanghai Gonglu Yunshushi Weiyuanhui. *Shanghai Gonglu Yunshu Shi* (Shanghai Roads and Transportation History), first edition. Shanghai Shehui Kexueyuan Chubanshe, 1988: p.99-100.

Table 3.1

Year	Commercial Business	Privately Owned	Total Horse Drawn Carriages
1905	677	918	1,595
1906	711	976	1,687
1907	642	993	1,635
1908	595	916	1,511
1909	591	851	1,406
1910	574	792	1,366
1911	535	742	1,277
1912	520	749	1,269
1913	525	753	1,278
1914	455	735	1,290
1915	333	720	1,053
1916	284	731	1,015
1917	253	688	941
1918	252	634	886
1919	253	578	831
1920	278	539	817
1921	308	476	784
1922	341	406	747
1923	343	366	709
1924	315	333	648
1925	306	299	605
1926	295	252	547
1927	267	198	465
1928	251	156	407
1929	227	113	340
1930	189	83	272 ¹⁰⁴

The highest number of horse drawn carriages appeared to be during the first decade of the 20th century, with steady decreases afterwards. During the early years of its inception, the horse drawn carriage was quite expensive to rent. The average cost for monthly rental was 60 silver dollars, or 3 silver dollars per day. Because of the high costs, only the wealthy (mostly

¹⁰⁴ Shanghai Gonglu Yunshushi Weiyuanhui. *Shanghai Gonglu Yunshu Shi* (Shanghai Roads and Transportation History), first edition. Shanghai Shehui Kexueyuan Chubanshe, 1988: p.100.

foreigners) could afford to ride in horse drawn carriages. The typical carriage could carry four people in the back, and the passengers enjoyed a high class feel, as they were able to sit in an open-air seat as they traveled along the main roads of the city. Eventually a cheaper form of horse carriage known as the “wild chicken horse carriage” appeared, specifically for transporting common people. The “wild chicken horse carriage” had cramped seats in the back, which could take as many as eight people. The typical fare was ten cents per passenger per stop. The carriages carried passengers from Number 16 Pu to Hongkou from 7 am in the morning to 10 pm at night, with arrivals coming every half hour each day. Prior to the introduction of the tram and trolley, the cheaper version of this horse drawn carriage was a common sight for both transporting supplies and people in both foreign concessions and the Chinese city.¹⁰⁵

As the number of horse-drawn carriages increased, the Shanghai Municipal Council established the “Traffic and Licensing Bye-Laws Committee”, appointed at the ratepayers’ meeting in the International Settlement on March 21, 1916. This traffic and licensing committee would set laws, regulations, and policies on all forms of transportation vehicles. The conditions to operate each type of vehicle would be addressed, and safety laws regarding pedestrians would be established. In regards to the horse-drawn carriage, the following rules and regulations on all International Settlement roads and alleyways would be observed from then on:

“No person in charge of any vehicle or when riding a horse, pony or other animal shall drive or move such vehicle or ride such horse, pony or other animal on any road recklessly or negligently or at a speed or in a manner which is dangerous to the public, having regard to all the circumstances of the case, including the nature, condition and use of such road and to the amount of the traffic which eventually us at the time or which might reasonably be expected to be thereon.”

“No person in charge thereof shall leave on any road any horse or other animal, whether attached to any carriage or not, without some competent person in charge, such person

¹⁰⁵ Xiong, Yuezhi, Zhou, Wu, Er, Dongqiang editors. *Shanghai: Yizuo Xiandaihua Doushi de Biannian Shi*. Shanghai Bookstore Publishing House, 2007: p.97.

being in such a position as to have complete and immediate control over such horse or animal by means of the bridle.”

“No person in charge thereof shall drive on any road any horse or other animal drawing any heavy wagon, cart, or other vehicle at any faster rate than a common walk.”

“No person shall be asleep while in charge of any horse, pony or mule while on any road whether attached to any vehicle or not.”

“No person in charge thereof shall permit or cause any carriage, with or without horse, pony or other animal to stand on any road, at a place where it may obstruct traffic, for a longer time than is necessary for loading or unloading, or taking up or setting down passengers, and no person by means of any vehicle or animal shall willfully interrupt any crossing, or willfully cause any obstruction in any road, or shall refuse to cause such carriage or other vehicle to be removed upon reasonable request by the Police.”

“No person shall break in or lead for exercise any horse, pony or mule on any road, so as to obstruct the traffic or as to cause danger, inconvenience or nuisance to the persons using such road or living in houses abutting on such road.”

“Every person shall, except in case of accident or other special circumstance, harness or unharness any horse, pony, or mule on any road.”

“Every person leading a horse, or pony, or mule or in charge of any cattle on any road after sunset shall carry a light.”¹⁰⁶

As more horse-drawn carriages were used, the problem of where to store these horses at night appeared. The Shanghai Municipal Council decreed that new premises had to be built to keep these horses in safe and sanitary places. The privately owned Shanghai Hsing Ya Chemical Manufacturing Company, Ltd. saw an opportunity to expand their business ventures. The Chinese general manager wrote to and received approval for his company to purchase a piece of land and build new premises to store horses, since the previous premises were too small. His company bought a plot measuring over 2 mow, located near Hart Road near Connaught Road in

¹⁰⁶ “Report of the Traffic and Licensing Bye-Laws Committee-Appointed at the Ratepayers’ Meeting of March 21, 1916.” Shanghai: Printed by Kelly and Walsh, Limited., 1916. Shanghai Municipal Archives: U1-16-184.

order to build a large stable for ponies. The company noted that every effort will be made to maintain the stable for sanitary condition.¹⁰⁷

The Shanghai Municipal Council's Public Health Department ordered veterinarians to inspect horse stables annually to ensure that proper sanitary conditions were met and that no animal diseases could spread. In an inspection report written by an assistant veterinary surgeon of a horse compound to the Public Health Department, the following conditions were described:

"I visited Dr. Ke's Biological Laboratory at 322 Yenping Road this morning and found that the whole concern consists of two and a half mow of land on which there are two separate buildings, i.e. one for the manufacture of biological, and the other, a stable. The stable is very well built and contains 52 separate stalls, all of which made of concrete. The floor of the stall is well drained and paved, with an automatic water trough in each stall. All horse manure being deposited in an enclosed receptacle at the north east corner of the premises, and removed daily.

At present there are 41 horse which, with the exception of one, are in fine condition, and kept well groomed. There are 13 coolies and 1 foreman to attend these horses, and the stable is kept very clean. The Laboratory building is in the course of being equipped with fittings and various necessary equipment."¹⁰⁸

After numerous incidents of heavy cargo falling out and complaints from passengers about the slow speed of the horse drawn carriage, a law was passed in the Chinese city that the carriages could not be more than one ton in weight. Since the original purpose of the horse drawn carriage was to transport heavy equipment and supplies for at least four passengers, reducing its weight made it become less competitive with other lighter vehicles for both cargo and passenger transportation. While the horse drawn carriage remained in use throughout the first half of the 20th century during the GMD era, on the eve of the Communist takeover of Shanghai in 1949, there were only 63 horse drawn carriages left in the entire city. By 1956, the horse drawn

¹⁰⁷ "New premise to be built." Document from Shanghai Hsing Ya Chemical Manufacturing Company, Ltd. to Shanghai Municipal Council. Shanghai Municipal Council Translation Office, Oct. 14, 1939. Shanghai Municipal Archives: U1-16-1512.

¹⁰⁸ "Dr. Ke's Biological Laboratory. 322 Yenping Rd." Inspection Report by Veterinary Surgeon of Public Health Department, Shanghai Municipal Council, Sept. 18, 1940. Shanghai Municipal Archives.

carriage would be completely phased out as a transportation vehicle for both supplies and people.

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Compared to New York City, the horse-powered carriages were used much later in Shanghai. In New York, horsecars had arrived during the early 19th century. By 1838, there were over 100 horsecars covering routes between City Hall and Harlem, with stations at Fourth Avenue and Twenty Seventh Street. The horsecars greatly expanded its patronage by carrying both local passengers within the city and passengers commuting from the northern end of Manhattan to offices in lower Manhattan. These routes carried more than one million passengers by 1840 and three and a half million passengers by 1859. In the late 1850s, fares were six cents for local passengers and were considered affordable for most of New York's commuters.¹¹⁰

In New York, the horse-powered vehicles witnessed a decline at around the turn of the turn of the 20th century. In some cases, with the construction of street railways, the change from horse-powered to electric-powered transit occurred rapidly. The disappearance of the urban horse from public transit was the result of both environmental and safety concerns, as well as the arrival of more modern vehicles. The horsecars had caused tremendous environmental and sanitation problems for a city going through a rapid phase of population growths. Residents and government officials could not effectively deal with the horse manure and the number of dead horses on the roads. Commercial store owners complained that the stench from horse dung was so bad it was driving away potential customers. Dead horse carcasses on busy streets were blocking traffic, and it was difficult for sanitation workers to remove dead horses during

¹⁰⁹ Shanghai Gonglu Yunshushi Weiyuanhui. *Shanghai Gonglu Yunshu Shi* (Shanghai Roads and Transportation History), first edition. Shanghai Shehui Kexueyuan Chubanshe, 1988: p.100.

¹¹⁰ McShane, Clay and Joel Tarr. *The Horse in the City: Living Machines in the 19th Century*. Baltimore: Johns Hopkins University Press: p. 63-67.

daytime.¹¹¹ After the turn of the century, the horsecars were beginning to be phased out, and other forms of transportation; most notably automobiles appeared on New York's streets.

Initially, both cities welcomed horse-powered vehicles because they could carry heavy cargo and passengers. However, environmental and sanitation, along with safety concerns resulted in the eventual demise of these horse-driven vehicles. The era of the horse-powered transport in New York covered from around 1830-1900, and in Shanghai from around 1850-1930. New York appeared to be ahead of Shanghai in introducing and phasing out the urban horse by about 20-30 years.

The Rickshaw

The rickshaw would become the quintessential image of China's backwardness in the early 20th century, as numerous pictures of an impoverished puller using his own body to pull a rickshaw were contrasted with pictures of modern machine-powered automobiles, trams, or trolleys in the backdrop to highlight the growing disparities of rich and poor. However, unlike the wheelbarrow or the sedan chair, the rickshaw is neither a native Chinese nor an ancient invention. The rickshaw was invented in Japan during the 1860s to aid the crippled and the convalescent, so the early rickshaws looked like a sedan chair awkwardly mounted on an axle and oversized wheels.¹¹² Later on, refinements were made to include the use of springs, ball bearings, and rubber tires to turn the rickshaw from a wheelchair-like vehicle into a light and efficiency, yet simple machine that spread throughout Asia to China, Korea, Southeast Asia, and India during the late 19th century. This simple yet highly productive technological invention was

¹¹¹ McShane, Clay and Joel Tarr. *The Horse in the City: Living Machines in the 19th Century*. Baltimore: Johns Hopkins University Press: p. 165-178.

¹¹² Tsuchida Mitsufumi, "Rickshaw", *Kodansha Encyclopedia of Japan*, vol.6 (Tokyo: Kodansha, 1983), p.311; Joseph I.C. Clarke, *Japan at First Hand: Her Islands, Their People, the Picturesque, the Real* (New York: Dodd, Mead and Co., 1920), p.182; and John R. Black, *Young Japan*, vol.2 (London: Trubner, 1881), p.312 in Strand, David. *Rickshaw Beijing*. Berkeley: University of California Press, 1989: p.23.

able to capitalize on the small amounts of capital needed for production, the large pool of unskilled labor that could carry it, and the high demand among passengers for personal transportation to become a symbolic feature in many Asian urban landscapes.¹¹³ From the late 19th to early 20th centuries, the rickshaw would become the signature characteristic of the distinctively Asian form of transportation.

The rickshaw was first introduced into China via Shanghai in the spring of 1873 by a French merchant named Menard, who came from Japan and wanted to operate the rickshaw business in the French Concession just like it had been done in Japan. In June 1873, Menard petitioned the French Municipal Council for a patent to use the rickshaw for the next ten years as an experiment to see if the rickshaws could be profitable there. After consulting with the Shanghai Municipal Council of the International Settlement, the two councils agreed to permit the rickshaws to operate in both the settlement and the concession since the operations of these vehicles would efficiently move the flow of traffic and increase revenues for both the British and the French. The two municipal councils allowed for up to 1,000 rickshaws to operate in the two foreign controlled territories (500 in each) and a license was issued for every 25 rickshaws. The following year, on March 24, 1874, Menard registered the first rickshaw business in Shanghai. He was followed by nine other rickshaw companies, all owned and operated by Westerners. At the end of 1874, there were about 1,000 rickshaws total on the streets of Shanghai.¹¹⁴

¹¹³ Strand, David. *Rickshaw Beijing*. Berkeley: University of California Press, 1989: p.24.

¹¹⁴ Waley, *Tokyo*, p. 167-68; *Shanghai shenghuo* 2, no.2 (July 1938: 13); Krasno, *Strangers Always*, p.112; Seidensticker, *Low City, High City*, p.42; Shanghai gongyong shiye guanliju, *Shanghai gongyong shiye*, p.248-49; Shanghai chuzu qiche gongsi, *Shanghai chuzu qiche renliche*, 73-74 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p.68



Figure 3.4: Rickshaw in the 1870s.

This rickshaw was characterized by its large wheels. Large heavy rickshaws were very tiring to pull, especially over long distances.

Source: Wang, Liqun. *Shanghai Shi Lunzi Zhuan Chulai De* (The Wheels of Shanghai). Shanghai: Xuelin Chuban She, 1999.

When the Japanese rickshaw was first introduced into Shanghai, it was called the *dongyangche*, meaning the “foreign vehicle from the East”. Eventually, the name was changed to *renliche*, meaning “man-powered vehicle” in Chinese. The popularity of the rickshaws grew quickly in the foreign territories, increasing from about 1,500 licensed rickshaws in 1882 to 8,718 rickshaws in just the International Settlement alone by 1914. The success of the rickshaws could be attributed to its flexibility and comfort. The rickshaws could move about easily in almost every corner of Shanghai’s winding and narrow streets and alleyways, just like the simpler wheelbarrow could. However, it was much more comfortable for the passenger to ride in

the rickshaw than it was to sit in the single-wheeled wheelbarrow. The rickshaw was flexible because it was available at any time, and the puller could stop whenever and wherever the passenger wanted to get off. This made the rickshaw more convenient than the tram, trolley, or bus that arrived later because these vehicles had regular schedules and stops.¹¹⁵

After the rickshaw was introduced into China, technical upgrades were made to make the rickshaw for adaptive to moving around Shanghai's roads. Modifications included discarding the original iron-shod wooden wheels in favor of solid rubber tires; using pneumatic rubber tires for better traction; adding a backrest to make the passenger more comfortable; replacing the flat, hard seat with spring cushions; and adding lights to make the rickshaw look more attractive for prospective passengers than the simple, primitive wheelbarrow.¹¹⁶ The rickshaw combined elements of both the wheelbarrow and the sedan chair to become an ideal form of transportation that was particularly suited to traveling around Shanghai. Although it was not a Chinese invention, adaptations and adjustments were made to upgrade the rickshaw to make it more fit for use in China. The rickshaw was similar to the sedan chair in that the passenger could sit in a chair while riding, and was seen as an upgrade in status and comfort over the wheelbarrow where the passenger could not rest his back. However, the rickshaw was also similar to the wheelbarrow in that only one puller was needed to carry it, instead of the usual four carriers needed to move a sedan chair. Compared to the sedan chair, the rickshaw was more labor-

¹¹⁵ *Chinese Economic Monthly* (May 1925): 35, cited in Fang Fu-an, "Rickshaws in China", 798; Shanghai chuzu qiche gongsi, *Shanghai chuzu qiche renliche*, 74; *China Weekly Review* (April 7, 1934) :214 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p. 68-69.

¹¹⁶ Zheng, Yimei, *Shanghai jiu hua*, 17-18; Tu Shipin, *Shanghai chungju zhong*: 34 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p. 69.

efficient and less extravagant. Yet, compared to the wheelbarrow, the rickshaw was more modernized and comfortable.

Beside Shanghai, the rickshaw had made its way into many other Chinese cities. It first appeared in Beijing in 1886, where it competed for passengers with horse drawn carriages, mule carters, sedan chairs, and wheelbarrows there. By the early 1900s, numerous rickshaw garages opened and rented out these vehicles to laborers, who solicited passengers on the streets. The Beijing rickshaws of the early 1900s was rough riding and noisy as its tires made squeaky sounds on the road. The body and wheel rims were made of iron, and the shafts held by the rickshaw puller were short and mounted very high that made pulling very difficult and slow. Rickshaws made a terrible clanking noise, often bounced passengers around in their seats when there was a bump on the road, or got stuck in the mud. By the mid 1900s, a light frame and rubber tires made it easier for the puller to pull. Instead of having two laborers where one was a puller at the front and another was a pusher at the back to push the rickshaw from behind whenever it was stuck, only one puller was needed.¹¹⁷

Another significant development that contributed to the success of the rickshaws was the creation of more paved avenues in major cities throughout China. In Beijing, prior to 1900 streets were dirty and usually unpaved. Replacing dirt or cobbles with pavement became vital to the rickshaw business there. Most of Beijing's center sections of major roads were paved by the turn of the 20th century; but cart tracks, sides and alleyways were still unpaved. The rickshaws could take advantage of the parallel road systems to speed along the macadam with other light tired vehicles, while still being able to move in unpaved streets. As a result, the rickshaw replaced horses and wheelbarrows as the most widespread form of transportation in Beijing.

¹¹⁷ Li, Jinghan, "An investigation of conditions," p.1 in Strand, David. *Rickshaw Beijing*. Berkeley: University of California Press, 1989: p.25.

Chinese historian David Strand argued that rickshaws multiplied in Beijing as a result of private entrepreneurship, mostly from Chinese businessmen seeking opportunities to profit from a growing urban population rather than government planning or official decrees there.¹¹⁸ By the turn of the 20th century, the rickshaw had modernized urban transportation, speeded up the flow of traffic, and effectively channeled the movement of people in both Shanghai and Beijing.

It was in Shanghai's International Settlement that the rickshaws were most commonly used. In 1900, there were a total of 4,667 rickshaws for public hire there. By 1907, the number had jumped to 8,204. During this time period, private rickshaws known as *baoche* appeared. In 1907, there were 5,625 private rickshaws registered in the settlement. To distinguish between the public and privately registered rickshaws, the public ones were painted yellow, and called *huangbao che*, meaning "yellow-covered vehicle" in Chinese. The private ones were painted black. Although their physical structures looked similar, the painted colors allowed the passengers to easily see which rickshaw was public, and which was private. In general, public rickshaws looked shabby and dilapidated, even though they seldom broke down on the road. By contrast, private rickshaws were always shiny, well maintained, had a clean seat and plaid, and even a wide protective tarpaulin to protect the passengers from the rain.¹¹⁹

As rickshaws became a common conveyance, the types of passengers that rode the public or private rickshaws differed based on their wealth and status. By the 1930s, there were more than 23,000 registered rickshaws in operation, or an average of 1 public rickshaw for every 150

¹¹⁸ *Chinese Economic Bulletin*, 10 October 1925, pp.209-210; 2 January 1926, p.11; 11 April 1925, p.212; 23 April 1927, p.211 in Strand, David. *Rickshaw Beijing*. Berkeley: University of California Press, 1989: p.25-26.

¹¹⁹ Shanghai shi jiaotong yunshu ju, *Shanghai gonglu yunshu shi*, 32; Darwent, *Shanghai*, p.99; Krasno, *Strangers Always*, 110-11 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p. 69-70.

people in Shanghai. Public rickshaw fares were fairly affordable for the common people. From 1917-1937, the typical fare for the first mile or less cost around 10 cents, with each additional half mile or less costing another 10 cents if the fare was charged by distance. When the fare was charged by time, a ride of one hour or less cost around 50 cents, with each subsequent hour or less costing about 40-50 cents. These were official fees set by the Shanghai Municipal Council in the International Settlement, although it was not strictly enforced.¹²⁰ Often times, the actual fares were higher as rickshaw pullers and passengers bargained and negotiated over the fares. Pullers could easily tell if the passenger was familiar with the city's layout or not; and often tried to swindle their passengers by taking them along longer routes to their destinations, thus charging them high fares.¹²¹ Overall, rickshaw fares were within the means of most common people.

¹²⁰ Shanghai gongyong shiye guanliju, *Shanghai gongyong shiye*, p.250; Fang Fu-an, "Rickshaw in China", 800; Darwent, *Shanghai*, xiv in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p. 71.

¹²¹ Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p. 98-105.



Figure 3.5: Rows of rickshaws on the road.

Source: Wang, Liqun. *Shanghai Shi Lunzi Zhuan Chulai De* (The Wheels of Shanghai). Shanghai: Xuelin Chuban She, 1999.

To own a private rickshaw and having a personal puller was considered a luxury item that was limited to the upper middle class families of Shanghai. In Beijing, just like in Shanghai, it was not the rich that used the rickshaws. The rickshaw was considered the second rung on the status hierarchy of transportation modes. The ascending order was from buses to streetcars, to public rickshaws, then private rickshaws, followed by horse-drawn carriage, and finally to automobile. Successful upward mobility depended on an upgrade in one's personal transportation. According to Xi Ying, a Beijing journalist, having your own personal private rickshaw signaled to others that you have “made it”. He felt owning a private rickshaw “really is the passport of the petite bourgeoisie”, because people tended to think that after living in Beijing for several years, “if you don't have a private rickshaw, what on earth are you?”

The successful expansion of the rickshaw business in Beijing during the decades of the 1910s and 1920s were because of the suitability of the vehicle to the city's flat terrain and the

transportation needs of the growing professional and mercantile classes. Rickshaw travel, especially private rickshaws separated the city's professional class from the working class. The city's officials, moneyed or propertied classes could choose a wide range of elaborate rickshaws to highlight and showcase their status and privilege in public. The public rickshaws provided a less elaborate but efficient means of transport for people such as administrative office workers, journalists, university students, politicians, small businessmen, tourists, and others who lived in the suburbs of the Outer City but must commute to the Inner City or downtown to work in Beijing's governmental, financial, or educational institutions.¹²²

Similar to Shanghai, rickshaw pulling became a public spectacle on the streets of Beijing during the 1920s. It was estimated that as many as 60,000 men took as many as 500,000 fares a day in a city with a population of slightly more than one million. As many as one out of every six males in the city between the ages of 16 to 50 was a full time or part time puller. Rickshaw laborers and their families made up almost 20% of Beijing's total population.¹²³ The prominence of the rickshaw as a transportation vehicle and in providing employment opportunities for laborers, as well as its notoriety for being a sign of social segregation and class distinctions led to political and literary debates throughout China about its role in society. The rickshaw was praised for representing technological progress. Over short distances and narrow roads the rickshaw traveled faster than heavy, slow-moving mule carts. But critics pointed out that the rickshaw merely substituted animal power with human labor, and created a humiliating spectacle

¹²² Strand, David. *Rickshaw Beijing*. Berkeley: University of California Press, 1989: p.26-28.

¹²³ Li, Jinghan, "Beijing renli chefu xianzhuang di diaocha", *Shehui xue zazhi* 2: 4 (April 1925); Li, Jinghan, "An Investigation of conditions", p.1. in Strand, David. *Rickshaw Beijing*. Berkeley: University of California Press, 1989: p.20-21.

where poor laborers must use strenuous physical force to pull middle or upper class clients. The sight of one human being polling another became a symbol of oppression and exploitation.

In Shanghai, while the rickshaw business originated in the foreign controlled territories; after the 1880s, Chinese businessmen made their own rickshaws and as a result, prices for these vehicles began to fall. In 1898, Chinese businesses (called *chechang*), meaning “vehicle firms” rented out public rickshaws for hire in the Chinese city. Starting in 1910, rickshaw businesses sprang up in Zhabei, a newly developed Chinese district, and later firms were established in suburban areas like Huxi and Pudong. The major players in Shanghai’s rickshaw business were still foreigners because they owned the largest rickshaw companies. These companies rented rickshaws directly to Chinese contractors, who sublet the rickshaws to the pullers. The Chinese contractors played the role of middlemen in this business. During the 1920s, Chinese contractors began purchasing rickshaws from their foreign owners and took over many of the rickshaw companies in the Chinese city. By the late 1920s, the Chinese had owned most of the rickshaw business. During the Greater Shanghai Project where Shanghai was made into a special administrative municipality, the rickshaw industry reached a peak when the entire business from ownership to contractors to middlemen to pullers was entirely Chinese.¹²⁴

According to the Shanghai Municipal Bureau of Social Affairs, there were 80, 649 public rickshaw pullers, and in all the rickshaw business provided employment for more than 340,000 people, or about 10% of the entire population of the city by the early 1930s. Two studies on rickshaw pullers by the Shanghai Municipal Council and the Shanghai Municipal Bureau of Social Affairs estimated that in 1934, the average monthly income of the pullers was \$9.

¹²⁴ Shanghai chuzu qiche gongsi, *Shanghai chuzu qiche renliche*, 74; Shanghai gongyong shiye guanliju, *Shanghai gongyong shiye*, p.252; Hauser, *Shanghai: City for Sale*, 135; Zhu Bangxing et. Al, *Shanghai chanye yu Shanghai zhigong*, 674 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p. 72.

Compared to the average male factory worker's monthly salary of about \$25 in 1933, the rickshaw pullers earned only about 36% of those who worked in the factories.¹²⁵ Compared to Beijing, a smaller percentage of the labor force engaged in the rickshaw business. Beijing's rickshaw workers earned between \$10-\$12 a month during the 1920s, which was comparable to the incomes of policemen, unskilled craftsmen, servants, and most shop clerks. The rickshaw men of Beijing were considered poor but not impoverished. In fact, compared to Shanghai's rickshaw pullers, Beijing's rickshaw men were relatively well off. An experienced puller working long hours could earn around \$15 a month. When compared to the rest of Beijing's lower classes, comprised of about half of the city's workers and laborers, the upper strata of rickshaw men: those who were stronger or more experienced, enjoyed better living conditions such as moderately decent food, clothing, housing, or perhaps even extra cash for opera tickets or other forms of entertainment on the weekends.¹²⁶

So why did the Beijing rickshaw pullers earn more money and live better lives than the Shanghai rickshaw pullers? One critical difference is the origins of the rickshaw workers in these two cities. In Shanghai, almost all of the rickshaw pullers were not native residents of Shanghai, but poor migrants from rural villages in other provinces to escape poverty back home. The majority of Shanghai's rickshaw men came from the rural areas of Subei (northern part of Jiangsu province).¹²⁷ Beijing had a much smaller modern utility and industrial sector than Shanghai, and a large pool of local men were unemployed, or had jobs that paid less than

¹²⁵ Cai, Binxian, "Cong nongcun pochao suo jichulai de renlichefu wenti", 36-37; Ricksha Committee, "Report of Ricksha Committee", 66; Shanghai shi shehuiju; "Shanghaishi renlichefu", *Shehui banyuekan* 1, no.3 (1934): 39-41; Bureau of Social Affairs, *Standard of Living of Shanghai Laborers*, 3, 86; Shanghaishi shehuiju, "Shanghai de gongzi tongki", 15, 34-35 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p. 73-77.

¹²⁶ Li, Jinghan, "Lowest standard of living", p.6 in Strand, David. *Rickshaw Beijing*. Berkeley: University of California Press, 1989: p. 29-30.

¹²⁷ Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p.75.

rickshaw pulling. Less industrial development in Beijing contributed to more native workers participating in the rickshaw trade, which explained why rickshaw men comprised an even high percentage of the total labor force than in Shanghai. Since native residents of Beijing had homes to go, they did not have to spend money renting out places to live like migrant laborers in Shanghai had to. Besides finding cheap places in shantytowns to live, the migrant laborers of Shanghai also had to send money back home to their families in their rural villages. This would explain why Beijing's rickshaw workers would be able to spend their income on other things such as food, clothing, entertainment, etc.

Since Beijing's surface area and layout was much larger and its population more scattered, the need for rickshaws to commute was more significant than in Shanghai. As a result, a larger percentage of the workforce could be involved in the rickshaw trade and still make a decent living. The rickshaw workers of Beijing could be spread out throughout the city, picking up passengers commuting to its different corners and centers. Rickshaw pullers did not have to congregate in one particular area to compete for passengers. However, in Shanghai, since the city size was much smaller and more congested than in Beijing, the rickshaw pullers had to compete with each other for business. The pullers could not travel large distances since Shanghai was more geographically compact, and passengers usually did not need to travel very far to get from place to place. The longer distance it took to commute from place to place could explain the difference in incomes between Beijing and Shanghai rickshaw workers. Since pullers charged its passengers either by distance or by time, the Beijing pullers would benefit more from the longer distances and more travel time required of their customers.

While the rickshaw was beneficial to urban transport for many practical reasons, there were significant problems associated with it. An article commenting on the situation of the

“rickshamen” appeared in *The China Weekly Review* on August 10, 1935. The writer described the rickshaw problem here:

“The fundamental problem of too many rickshamen for the available trade continues a fundamental problem as it was before the authorities started to regulate it. The number of rickshas exceeds available customers by more than two to one and there are about four times too many rickshamen for the available number of vehicles. The best way to visualize the problem is to visit the block on Avenue Edward VII between Szechuan and Kiangsi roads on any night of the week, the best time being between 10 o’clock P.M. and midnight. Here in this one block one may count anywhere from 100 to 300 rickshamen fighting over a handful of customers who emerge from the bars and dives which occupy most of the Frenchtown side of the street. Often the street is so crowded that it is practically impossible to drive through in a motor car without an incident. The police apparently have long since given up the problem of forcing the hungry pullers to wait in line.”

The author continued by describing the living conditions of the rickshaw workers who lived in the shantytowns on the outskirts of the city.

“Next we come to the question of housing the poor, or providing quarters for some 94,122 destitute Chinese who live in straw-huts or beggar “villages” located on the fringes of the foreign settlement and the Chinese municipality.”¹²⁸

Most of those who lived in squalid conditions in these beggar “villages” were indeed rickshaw workers who had come to Shanghai from even poorer rural villages.

An article addressing the rickshaw problem appeared in *The China Quarterly* in August 1936:

“Upwards of one hundred thousand members of our Shanghai community are directly dependent, for their livelihood, on the income derived from pulling the nine thousand nine hundred and ninety rickshaws licensed by the International Settlement. This group is large enough, and its economic status is precarious enough, to claim the responsible interest of all of us. The Rickshaw Problem dates from the year 1874. That year the income to the Municipal Council, for licensing rickshaws, at two mace (a mace was a tenth of a tael) per month, totaled sixty taels. The rickshaws were dirty and dilapidated, without pneumatic tires, one and two passenger sizes, and in general much more of a public nuisance than service.

The number quickly increased, and four years later we have the first official regulation of the rickshaw traffic. It included the prohibition of two passenger vehicles, the

¹²⁸ “Rickshamen, Beggars, The Destitute and Tenements for the Poor”. *The China Weekly Review*, Volume 73, Number 11. Shanghai, China: Saturday, August 10, 1935: p. 351.

requirement of two pullers when two passengers were carried, and a prescribed width for the seat, and height for the hood. The number of licenses was limited to fifteen hundred. This limitation was the origin of a racketeering in licenses that remains one of the most serious difficulties in the rickshaw problem today. The fifteen hundred licenses were bought and sold with profit to no one except racketeers, with a consequent increase in the rentals charged by the pullers, and since the public refused to pay correspondingly increased fares, with a serious curtailment of the net income to the pullers. They went into debt to the owners and these debts were exploited without mercy, until the pullers were all intents and purposes owned by the rickshaw owners.

The Municipal council decided to sell these fifteen hundred rickshaw licenses to the highest bidders. This would transfer at least part of the profit from the pockets of the racketeers to the Council Treasury. But the owners and sub-leasees appealed to the Court of Consuls, and the Court declared the action to be illegal. Whereupon the Council increased the licensing rate to \$1.50 and removed the fifteen hundred limitation. The owners immediately submitted figures to prove that this would make impossible the continuance of their business, and withdrew their rickshaws to emphasize their protest. Meanwhile the lot of the increasing number of pullers was deplorable. A number of individuals and societies took sporadic and shortlived interest in their condition, but it was not until 1922 that anything like a serious study of the situation was made. By this time the rickshaw business had become so profitable to the owners. The pullers did not in any way participate in the profit; on the contrary they were being more severely exploited for increased rentals, by impossible charges for damaged vehicles, and by loan arrangements that rendered them wholly helpless in the hands of their masters, as voiceless in protest as were the rickshaws themselves.”¹²⁹

This article brought the plight of the rickshaw pullers to light by arguing that rickshaw pullers were being ruthlessly exploited for their cheap labor. Reforms were suggested to make rickshaws more humane, and to make working conditions better for rickshaw pullers.

In 1937, there were 41,797 rickshaws operating in Shanghai, which constituted the majority of man-powered vehicles.¹³⁰ The poor working conditions and charges of exploitation resulted in numerous rickshaw worker strikes throughout Shanghai. On May 27, 1938, as a result of the Sino-Japanese War, 40,000 rickshaw pullers are out of work. At a meeting the previous day, attended by 150 representatives of rickshaw pullers, important resolutions were adopted. The meeting decided among other things to ask relief for their unemployed fellow pullers from

¹²⁹ E.W. Luccock. “The Rickshaw Problem in the International Settlement”. *The China Quarterly*, August 1936: p. 65-74.

¹³⁰ *Shanghai shi gezhong cheliangshu: Fei zhidong che*. (All types of vehicles in Shanghai: non-motorized vehicles). Shanghai shi gongyong ju tongji she, January-December, 1937. Shanghai Municipal Archives.

the Shanghai Municipal Council, the French Municipal Council, the Chinese Ratepayers' Association and other charitable associations.¹³¹ On March 15, 1939, rickshaw pullers in Nantao (Nanshi in the Chinese city) declared a general strike to protest the increase of the monthly rickshaw tax from 40-80 cents the next day. There were 1,200 rickshaw pullers in Nantao who went on strike.¹³² The following year on April 15, 1940, 2,000 rickshaw pullers in Nantao went on strike against hire charge hikes. The pullers in Nantao declared a strike and appealed to the "Social Bureau" of the "Shanghai Special Municipality" for assistance.¹³³ Rickshaw pullers also went on strike in the French Concession on Oct. 19, 1940 over exploitation, poor wages, and safety concerns.¹³⁴

Hundreds of new rickshaw coolies get together each month at the French police station to buy licenses. Coolies pay 77 cents a month to the French Municipal Police for the right to operate in the French Concession. About 500 to 800 carts could be seen lined up each morning during the first 10 days of each month. The majority of coolies can't afford to take out yearly or even semi-annual licenses. Being barely able to eke out a living, most of them take out monthly licenses, which cost 77 cents, or 85 cents if their license plate from the previous month had been damaged in the French Concession. In the International Settlement, the license costs \$2.85, good for three months. The average income of the coolies range from \$20 to \$35 a month, depending on their luck in getting fares. Those who work regularly for big business establishments, such as brokerage offices and furniture shops can earn more. The coolies are hard workers who must rise early in the morning and usually work over 10 hours a day. Their only requisite is physical

¹³¹ "Many Ricksha Men Said Out of Jobs". *The Shanghai Environmental Post*, May 27, 1938. Shanghai Municipal Archives: U38-2-1-17.

¹³² "Ricksha Pullers in Nantao to Declare Strike". *Wen Hui Pao*, March 15, 1939. Shanghai Municipal Archives.

¹³³ "2,000 Nantao Ricksha Men Strike Against Hire Charge Hikes". *China Press*, April 15, 1940. Shanghai Municipal Archives.

¹³⁴ "French Concession Rickshaw Pullers on Strike". *National Herald*, October 19, 1940. Shanghai Municipal Archives.

strength and a thorough knowledge of local streets. Business is slack during the rainy weather. Coolies are dependent on the weather, as bad weather usually means little or no business.¹³⁵

In these instances, some measures were taken by the Shanghai Municipal Council in the International Settlement, the French Municipal Council in the French Concession and the Shanghai Special Municipality Social Bureau in the Chinese city to address the concerns of these rickshaw pullers. However, the problem was there were many more rural migrants flocking into Shanghai, especially after the Japanese invasion in 1937 that sought out any kind of work to support themselves and their families. While rickshaw pullers went on strike in certain sections of the city, there were plenty of others who would fill in and take their place, and pull their rickshaws in both foreign and Chinese territories.

The Bicycle

The bicycle is seen as a form of personal transportation rather than public transportation. This is because the bicycle, known as *zixingche* in Chinese, meaning “self-operating vehicle” can only carry one passenger. Unlike the rickshaw or sedan chair, the bicycle does not need a puller so it cannot create employment opportunities for laborers. Nevertheless, the bicycle is a foreign man-powered invention that became a popular transportation tool when it was introduced into Shanghai. The first known bicycle was introduced in Germany in 1817, which had two inline wheels connected by a wooden frame. The rider sat aside and pushed along with his feet, while steering the front wheel. It became popular in France, England, and Scotland during the 19th century, which featured a heavy steel frame on which wooden wheels with iron tires could be mounted. The primitive bicycles were very difficult to ride on because of the high seat and poor weight distribution made the rider vulnerable for dangerous falls. Eventually pneumatic tires

¹³⁵ “The Handcart Coolie”. *The Shanghai Environmental Post*, May 27, 1938. Shanghai Municipal Archives: U38-2-1-17.

replaced wooden ones, and the rear freewheel was developed, which allowed the rider to ride without the pedals spinning out of control.

The bicycle first appeared in China in 1876 where it became a riding toy inside the Forbidden City. When Emperor Guangxu saw foreigner riding these bicycles in Beijing, he found them to be extremely fascinating. Thus, the bicycle became a leisure toy rather than a transportation tool for the Qing imperial royalty. However, in Shanghai, the bicycle quickly became a riding vehicle for the masses. Bicycles were often rented out, with typical fares for new bicycle at 2 Chinese Yuan for one day or 30 cents for one hour. Used bicycles cost 1.5 Yuan for one day or 20 cents for one hour, and really old bikes for 80 cents for one day and 10 cents for one hour.¹³⁶ The biggest growth in the use of bicycles occurred from 1927 - 1935:

Table 3.2

Year	Chinese City	International Settlement	French Concession	Total
1927	9,562	15,436	4,132	29,130
1928	10,002	17,739	5,573	33,314
1929	13,209	20,327	6,785	40,321
1930	15,733	21,530	7,322	44,585
1931	19,256	23,547	8,041	50,844
1932	17,398	25,000	8,041	50,439
1933	21,880	29,500	8,041	59,421
1934	29,032	32,916	8,041	69,989
1935	29,360	35,743	8,041	73,144 ¹³⁷

The rise in the popularity of bicycles can be attributed to its growing acceptance among students, postal workers, and women as their preferred form of transportation. Bicycles were especially popular with women as they could ride to places on their own, without the escort of

¹³⁶ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p. 90-92.

¹³⁷ Xu, Tao. "Zhixinche Puji Yu Xiandai Shanghai Shehui." (Bicycles are Becoming Common in Modern Shanghai Society). Shilin: Shanghai Shihui Kexueyuan Lishi Yanjiusuo Chuban, 2007/1: p.105.

their husbands or a male relative. Unlike riding trams, trolleys, or buses, there was no need to rush to the designated station in order to catch the next scheduled vehicle or wait a long time for the next vehicle to arrive, nor did the rider have to cram onto these vehicles and compete for a seat with a multitude of other passengers. Beginning in 1911, the Shanghai postal office bought 100 bicycles from the British for their postal carriers to deliver mail to nearby locations. Eventually the bicycle became the primary method of delivering letters, newspapers, or documents, and was used by the telephone companies and police stations.

During the late 1910s to early 1920, the bicycle became a status symbol among wealthy students of private schools and universities. Many students, particularly female students wanted to have their own personal bicycles to ride to and from school, where they can carry their book bags on their back while riding at the same time. Schools began to designate specific areas on their campuses for students to park their bicycles. Having your own personal bicycle became a way to separate students from wealthy families from those coming from more modest backgrounds, as poor students had to walk home from school.¹³⁸ The total number of bicycles in Shanghai in 1948 was around 230,000, including both publicly rented and privately owned. Bicycles primarily served to transport light goods on short distances for commercial purposes.¹³⁹

The rise in the number of bicycles resulted from both the gradual expansion of the city's territory during the early 20th century and the drop in bicycles prices due to mass production. In the beginning of the 20th century, most residents of Shanghai walked from place to place, as the local neighborhoods usually provided all the necessary shopping, entertainment, and leisure one needed. The core of the city centered around the area between Suzhou Creek and the Huangpu

¹³⁸ Xu, Tao. "Zhixinche Puji Yu Xiandai Shanghai Shehui." (Bicycles are Becoming Common in Modern Shanghai Society). Shilin: Shanghai Shihui Kexueyuan Lishi Yanjiusuo Chuban, 2007/1: p.105.

¹³⁹ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p. 90-92.

River, and was easily without walking distance. However, as the city's geographic boundaries expanded to accommodate significant population increases, the size of the city grew larger. By 1930, the total area of the International Settlement reached 32.83 square kilometers, as compared to only 3.19 square kilometers when the settlement was first established, or a more than tenfold increase in size. After Shanghai was declared as a special administrative municipality in 1927, the Chinese section of the city saw gradual outward expansion as well. By 1949, the total area of the Chinese city reached 91 square kilometers, and the total surface area of the entire city including surrounding suburbs reached 622 square kilometers.¹⁴⁰ The expansion of the city's area meant neighborhoods, commercial and business centers were further from each other than before, and the longer distances required of going from one place to another caused many residents to choose the bicycle as opposed to walking in order to save time.

The second major factor was the drop in the cost of purchasing a bicycle and the rise of wages among Shanghai's middle class workers. From 1900-1920, when the bicycle was still considered to be a luxury item, the average cost was around 60 Yuan. Due to mass production, by the end of the average cost of a bicycle had dropped to about 44 Yuan, and by the 1930s, it had decreased to about 23 Yuan.¹⁴¹ As a result of its increasing affordability, the bicycle was no longer just used by the wealthy. Beginning in the late 1920s and early 1930s, more and more middle class families could afford to buy a bicycle as they commuted to and from work. Bicycles were most commonly seen on school campuses as it became a particularly popular method of commute for school teachers, as they saw more and more of their students ride bicycles to and from school.

¹⁴⁰ Xu, Tao. "Zhixinche Puji Yu Xiandai Shanghai Shehui." (Bicycles are Becoming Common in Modern Shanghai Society). Shilin: Shanghai Shihui Kexueyuan Lishi Yanjiusuo Chuban, 2007/1: p.106-107.

¹⁴¹ Xu, Tao. "Zhixinche Puji Yu Xiandai Shanghai Shehui." (Bicycles are Becoming Common in Modern Shanghai Society). Shilin: Shanghai Shihui Kexueyuan Lishi Yanjiusuo Chuban, 2007/1: p.108.

The average monthly incomes of Shanghai workers in different occupations in 1929 are listed in the table below. In 1930, China adopted a gold standard with the unit of account valued at 0.601866 grams of gold, or the equivalent of 2.5 Chinese Yuan= 1 U.S. dollar.¹⁴²

Table 3.3

Average Daily Wage Rates in 21 Industries in Shanghai, 1929

Industry	Rate Type Of Worker	Average Wage Per Day	Average Wage Rate Per Month
Wood working			
Sawing	Male	\$0.62	\$18.63 (Chinese Yuan ¥46.575)
Metallurgy			
Foundry		\$0.77	\$23.22 (¥58.05)
Machinery		\$0.78	\$23.49 (¥58.725)
Construction of boats		\$1.02	\$30.51 (¥76.275)
Shipbuilding			
Manufacture of bricks			
Glass-making	Adult	\$0.67	\$20.16 (¥50.40)
	Child	\$0.32	\$9.6 (¥24)
Manufacture of chemicals			
Soap-making	Male	\$0.54	\$16.29 (¥40.725)
	Female	\$0.32	\$9.66 (¥24.09)
Match-making	Male	\$0.80	\$24.09 (¥60.325)
	Female	\$0.24	\$16.65 (¥41.625)
Enamelling	Male	\$0.56	\$16.65 (¥41.625)
	Female	\$0.42	\$12.69 (¥31.725)
	Child	\$0.32	\$9.72 (¥24.30)
Textiles			
Silk reeling	Male	\$0.73	\$21.96 (¥54.90)
	Female	\$0.54	\$16.17 (¥40.425)
	Child	\$0.33	\$9.9 (¥24.75)
Cotton spinning	Male	\$0.55	\$16.56 (¥41.40)
	Female	\$0.45	\$13.56 (¥33.90)
	Child	\$0.30	\$9 (¥22.50)
Silk weaving	Male	\$1.26	\$37.8 (¥94.50)

¹⁴² Global Financial Data. "The Global History of Currencies (GHOC): China".

		Table 3.3 Continued	
	Female	\$0.89	\$26.82 (¥67.50)
Cotton weaving	Male	\$0.72	\$21.66 (¥54.15)
	Female	\$0.55	\$16.35 (¥40.875)
	Child	\$0.36	\$10.71 (¥26.775)
Silk & Cotton Knitting Male	Male	\$0.82	\$24.54 (¥61.35)
	Female	\$0.63	\$19.02 (¥47.55)
Bleaching & dyeing Male		\$0.47	\$14.04 (¥35.10)
Manufacture of leather			
Tanning		\$0.62	\$18.63 (¥46.575)
Manufacture of food			
Flour		\$0.56	\$16.83 (¥42.075)
Oils		\$0.60	\$18 (¥45)
Eggs	Male	\$0.62	\$18.69 (¥46.725)
	Female	\$0.46	\$13.77 (¥34.425)
Tobacco	Male	\$0.82	\$24.66 (¥61.65)
	Female	\$0.58	\$17.43 (¥43.575)
	Child	\$0.42	\$12.48 (¥31.20)
Paper & printing			
Paper-making	Male	\$0.66	\$19.8 (¥49.50)
	Female	\$0.35	\$10.56 (¥26.40)
Printing	Male	\$1.23	\$36.78 (¥91.95)
	Female	\$0.83	\$24.78 (¥61.95)
	Child	\$0.42	\$12.54 (¥31.35) ¹⁴³

The affordability of the bicycle by the late 1920s allowed most middle class Shanghai residents to be able to purchase a bicycle with less than one month salary. The advantage of the bicycle was that it did not need fuel or gas to recharge, nor did it need a parking permit to park. Not only did it save time in commuting, but the only cost needed was the initial payment for the

¹⁴³ "Average Hourly and Daily Wage Rates and Hours of Labour Per Day in 21 Industries in Shanghai, 1929." "Wages and Hours of Labour (Greater Shanghai), 1929", p. 135, Shanghai, Bureau of Social Affairs in *The China Yearbook 1934*: p. 263.

purchase of the bicycle. The durability of the bicycle allowed the rider to keep on using it for years, which made the bicycle a very good deal for a growing number of Shanghai residents.

As bicycles became more numerous, new owners were required to purchase bicycle licenses issued by either the foreign or Chinese authorities in which they lived in. In a Shanghai Municipal Council document regarding the issue of bicycle licenses, government policy in the International Settlement stated “the bicycle owners concerned are required to call at the Vehicle Inspection Office, 28 Changhsing Lu with their original licenses and vehicles to apply duly for the issue of licenses on the dates and according to the number given here under. After the necessary particulars have been reported and the vehicles inspected, the applicants shall pay the requisite fees without delay to the Vehicle License Section of the Finance Department of the First District Administration located within the Vehicle Inspection Office against the issue of new licenses.”¹⁴⁴

The popularity of the bicycles can be attributed to its suitability and convenience. They are mechanically simple, light, handy, adaptable and easy to ride. They are especially effective in the extremely narrow streets or lanes extending throughout the city, and since Shanghai’s terrain is mostly level with few hills, bikers can go anywhere as long as there is a road. Another advantage is the individualized means of transportation that the bicycle can provide which does not require state subsidy to provide parking lots. Bicycles are very economical and practical, can navigate large roads and small streets easily, and can be parked anywhere with a lock. Furthermore, bicycles do not pollute the environment in any ways, as they require no fuel or electric power. A bicycle advertisement with pictures appeared in *The North China Herald* that marketed the usefulness of the bicycle:

¹⁴⁴ “Notification No. 192. Issue of Bicycle Licenses of Former 8th District.” First District Administration, Shanghai Special Municipality, Shanghai Municipal Council, February 18, 1944. Shanghai Municipal Archives: 000206.

“International Bicycle Co. 392-95 Nanking Road & No. 7, Broadway, Shanghai. Humber, Columbia and Imperial Cycles. Ballistic Cartridges. Repair a specialty. Shanghai, 3rd August, 1903.”¹⁴⁵

In David Hounshell’s *From the American System to Mass Production*, the bicycle became the new product that could bridge the gap between the more flexible but less productive system and the system of mass production. The bicycle played a significant transitional role in the development of American mass production. The physical characteristics of the bicycle provided a stepping stone to the design of the automobile. Hounshell noted that many early automobiles chassis consisted of bicycle tubing and tires, and many automobile companies were also manufacturers of bicycles. The American public also enjoyed this new form of personalized transportation for both recreation and to get to the workplace. In the 1890s, more and more Americans owned bicycles with annual sales exceeding 1.2 million in 1896.

As bicycles became more popular, entirely new developments occurred in bicycle design and production. Sheet metal stamping and electric resistance welding techniques were adopted. During the 1890s, American bicycle manufacturers used many components including pedals, crank hangers, steering heads, joints, forks, hubs, etc. made of sheet steel. Punch pressing or stamping operations were used along with newer technology such as electric resistance welding to produce bicycle parts at much lower costs. This technology would be crucial to the development of the automobile industry later on.¹⁴⁶ Joseph Woodworth described in his book *American Tool Making and Interchangeable Manufacturing* that the bicycle became the product in which the American system of manufacturing was showcased to the rest of the world as an efficient and productive system that could design and manufacture machinery, tools, and devices economically and quickly. The key was the installation of the interchangeable system of

¹⁴⁵ *The North China Herald*. January, 23, 1904.

¹⁴⁶ Hounshell, David. *From the American System to Mass Production, 1800-1932: The Development of Manufacturing Technology in the United States*. Baltimore: Johns Hopkins University Press, 1984: p. 8.

manufacturing where interchangeable tools could be produced and utilized for the production of large quantities.¹⁴⁷

A study done in Shanghai showed that 85% of residents who used bicycles traveled distances of eight kilometers or less in journeys of less than 30 minutes, whereas 13% of bikers ride for 30-60 minutes and over distances of 8-15 kilometers, and only 2% ride the bike for more than 1 hour or more than 15 kilometers. The average distance of bicycle travel is 5 kilometers or less, with a corresponding time of about 20 minutes. This showed that residents used the bicycles if they plan to travel short distances, such as to their workplaces or for light delivery of goods and items.¹⁴⁸ People most likely will not ride the bicycle if they must go from one side of the city to the other, or if they must carry heavy stuff. The bicycle did not affect any other methods of public transportation by taking away potential customers. As a form of personal transportation, the bicycle replaced walking as the conventional method of going from place to place in relatively short distances. It was not a vehicle that competed with other forms of transportation.

The Purposes and Impact of Man-Powered Vehicles

To answer the first question addressed in the beginning of the chapter of what made these man-powered vehicles so effective and useful in Shanghai's setting, it is important to first look at the terrain and roads there. Most of Shanghai's roads, especially in the Chinese city were not paved until the early 20th century. Unpaved roads along with narrow and winding alleyways allowed smaller and more nimble vehicles to be more mobile. The ability to move in and out of crowded and congested alleyways, and being able to pick up or drop off passengers any time and

¹⁴⁷ Woodworth, Joseph. *American Toolmaking and Interchangeable Manufacturing*. New York: The Norman W. Henley Publishing Company, 1905.

¹⁴⁸ Cai, Jin Xin. "Bicycle Transportation in Shanghai: Status and Prospects." *Transportation Research Record*, No. 1563 (Nov. 1996).

anywhere made the wheelbarrow, rickshaw, and bicycle the mode of choice for many urban residents. Shanghai's growing commercial and industrial expansion forced road constructions to be built, and for major roads to be paved. Heavy cargo and large quantities of goods or supplies were needed to facilitate this urban growth. For a period of time during the late 19th to the early 20th centuries, the horse-drawn carriage fit the needs of carrying heavy equipment for long distances in the city. The sedan chair's role evolved from carrying the imperial royalty to a ceremonial role of becoming a cultural ritual during weddings or festivals.

The second question examined the relationship between the various forms and methods of public transportation that ranged from primitive man-powered to modernized machine-powered vehicles. In Joseph Schumpeter's theory of creative destruction, he had proposed the notion that the process of transformation would result in the form of radical invention; where newer and more efficient technological inventions would eradicate or wipe out older systems that had been successful in the past in order for society to sustain economic growth.¹⁴⁹ Yet in Shanghai's case, newer inventions in the form of motorized vehicles did not wipe out, or at least did not completely root out man-powered vehicles. This phenomenon could be explained by Shanghai's continuous population growths, and the fact that different transportation vehicle did not necessarily compete directly with each other for customers. Instead, each transportation vehicle catered to a particular clientele, or served a particular niche in society.

Each type of man-powered vehicle had a specific role or purpose to play, or filled a specific need in Shanghai's transportation industry. Given Shanghai's tenfold population boom, every social class witnessed a rapid growth in population among its socioeconomic status. This created a different niche for each social group based on class and economic status. The poor, the middle class, and the wealthy all needed to travel and get around the city. Combined with an

¹⁴⁹ Schumpeter, Joseph. *Capitalism, Socialism and Democracy*. New York: Harper, 1942.

expansion of the city's original boundaries and the enlargement of the city's surface area, public transit became more important than ever for residents to commute to work, home, or leisure. Public transportation became a venue where social status could be publicly displayed. Just like food, clothing, housing, and entertainment, transportation was a form of material culture that distinguished the rich from the poor, the haves from the have-nots, and the sophisticated from the uneducated. A particular form of hierarchy built up in the selection or choice of one's method of travel. The lowest rung on the hierarchical ladder was the wheelbarrow, which could hold multiple passengers and charged the cheapest fees. Next came the rickshaw and bicycle, which was used by the growing middle classes. The wealthy and powerful Chinese could continue to ride in the sedan chair. The horse-drawn carriage catered primarily to large and heavy amounts of cargo more than the transport of individual passengers. Since each of these man-powered vehicles served distinct purposes and had their own particular clientele, there was little or no overlap between them. This allowed all these forms of vehicles to co-exist side-by-side, and even after the arrival of motorized vehicles, there was no direct conflict or competition between man-powered and machine-powered vehicles since it was understood that they each had their own specific functions.

Man-powered vehicles had a profound impact on Shanghai's urban development during this time period. Perhaps of all these vehicles, the rickshaw had the most obvious and evident impact on Chinese society. The rickshaw is an example of a foreign technological invention that was diffused and modified when it was introduced into China to accommodate the specific conditions of Chinese cities. While the rickshaw itself was a Japanese invention, brought to China by Westerners, its fundamental purpose was altered. It was no longer just a tool to transport the disabled or the handicapped, but instead it became a popular vehicle for the

mainstream mass movement of people. The rickshaw was adjusted to fit the Chinese urban landscape by adding rubber tires to make it easier to move about, backrest and soft seats to make the ride more comfortable for the passenger, and a cover to protect the rider from the rain. Though initially controlled by foreigners, eventually the rickshaw business became Chinese-owned and operated, as the Chinese bought these rickshaw businesses from foreigners and established their own trade.

The rickshaw became the most notable form of transportation in Shanghai during the Republican period of the 1920s and 1930s. Even after the introduction of more modern machine-powered vehicles, the rickshaw remained an important method of transportation. The rickshaw had distinctive advantages over motorized vehicles in navigating the narrow and winding streets and alleyways, could pick up and drop off passengers any time anywhere, and was seen as a public display of wealth and social status.

The biggest reason for its continued operation was the employment opportunities this trade created for the tens of thousands of unskilled migrant laborers from the countryside who had flocked to Shanghai, and for the unskilled native residents of Beijing. For these unskilled laborers, the rickshaw trade gave them their livelihood and allowed them to survive in the city. Both foreign and Chinese authorities realized that without the rickshaw business, tens of thousands of unskilled migrant workers would have no jobs and that would cause all sorts of social problems. Without an employment outlet, unskilled rural migrants would most likely resort to crime, or beg and steal in order to survive. This could potentially result in major social unrest, which neither the foreign nor Chinese authorities wanted to deal with. The rickshaw industry granted this mass employment opportunity for these unskilled laborers in not only providing mobility for Shanghai's residents, but to prevent social and political instability or mass

unrest. Despite its “inhumane”, “cruel”, and “primitive” descriptions, the rickshaw was used until 1955, well after the founding of the People’s Republic when it would finally be eliminated.

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For over 80 years, the rickshaw reflected the backwardness of China as compared to the modernity of the automobiles in the West, yet the rickshaw represented an integral part of Shanghai’s population expansion, commercial and industrial development, and served as an intersection that connected the ancient and the modern, native and foreign, urban and rural, rich and poor, and most importantly, the past and the future. Man-powered vehicles left a lasting legacy in reshaping the course of Shanghai’s historical development and growth before and after the arrival of machine-powered vehicles.

¹⁵⁰ Shanghai gongyong shiye guanliju, *Shanghai gongyong shiye*, p.284 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999, p. 91.

Chapter 4

The Age of Modernity: The Arrival of Machine-Powered Vehicles

The turn of the 20th century ushered in a new era that brought about the arrival of machine-powered vehicles into Shanghai. With the arrival of machine-powered motorized vehicles, the landscape of the city would be forever altered. While machine-powered vehicles such as the automobile, the tram and trolley, the bus, and the taxi brought convenience and expanded the options that Shanghai residents had, they did not completely replace traditional man-powered vehicles. Instead, both man-powered and machine-powered vehicles appeared to serve the needs of Shanghai's growing population, and each form of vehicle served specific purposes and functions. This chapter will ask the questions of what forces brought about the arrival of machine-powered vehicles, how were each of these vehicles used to fulfill the needs of Shanghai's public transportation, what were the advantages and disadvantages of each form of vehicle, who were the passengers who used these vehicles, and how were their socio-economic statuses publicly reflected when they were riding in these vehicles? Understanding the purposes, functions, roles, and social significance of each form of machine-powered vehicle will help explain the complex and multi-faceted urban landscape of Shanghai's roads where modern and traditional forms of public transport continued to exist side-by-side into the first half of the 20th century.

The Automobile

The automobile or *qiche*, meaning “gas vehicle” in Chinese was brought to Shanghai in 1901 by a Hungarian named Leinz. The early automobile resembled a box-shaped vehicle with four wheels. In fact, it was often called a “sedan chair on four wheels”, and looked awkward on the outside with its rectangular shape. Nevertheless, the automobile gained interest as people could see the benefits of being able to put large amounts of cargo in the trunk while sitting inside. Like the sedan chair, the automobile could protect its passengers from the sun or rain. But

it could also serve as storage as the passenger could put luggage and other heavy items in the back. By far the biggest advantage the vehicle provided was speed. The automobile became an instant success as its number increased from only 2 vehicles when Leinz first introduced them in 1901 to 1,400 cars by 1911, 12,695 by 1927, 19,655 by 1930, and 24,572 in Shanghai in 1936.¹⁵¹ By the 1930s, the automobile became the transportation vehicle of choice for long distance travel. During the early 1930s, there were over 40 automobile companies representing a wide range of cars, from the luxurious Mercedes Benz to the classic Ford Model T. While the number of privately owned cars remained small, and was limited only to the wealthy, many middle class people used cars for important occasions such as weddings or picking up guests to urgent needs such as rushing to the hospital.¹⁵² The automobile signaled the important transition from the man-powered vehicles of the 19th century to the machine-powered vehicles of the 20th century, and highlighted the growing influences of foreign inventions into the Chinese market, as well as accommodations and adaptations made to better utilize these foreign vehicles in Shanghai's particular environment.

The North China Daily News began printing advertisements for the purchase of private automobiles as early as 1904. For the wealthy foreigners living in the settlement, owning a personal automobile was a reminder of the modern amenities available in Western cities that are now beginning to be available in Shanghai. By the turn of the 20th century, roads in the International Settlement and French Concession were built for automobiles. The area of the foreign settlements had enlarged significantly, and automobiles were needed for quicker commute.

¹⁵¹ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.75-76.

¹⁵² Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.77-80.

"Automobiles, Motor-Bicycles, Gazoline-Launhes: Sale and Repair. French and American Makes. E. Pinguet, 351, Nanking Road. 15 Jan, 1904"

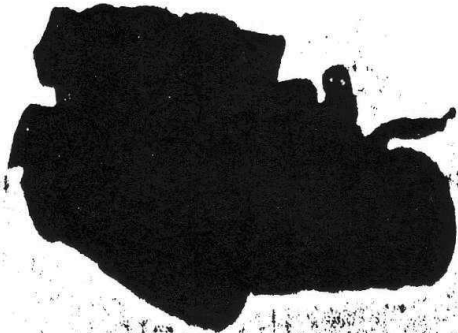
"The Thomas Motor Car, Model No. 18 is without exception, equal to any car manufactured. Beautiful in Design, Finish and Style. Perfect in Materials, Workmanship, and in Operation. We have one of the Model 18 Cars in stock. Will be pleased to exhibit to any one interested. New York Export and Import Company. 45 Kiangse Road, Shanghai. 22nd, Jan, 1904." ¹⁵³

THE THOMAS MOTOR CAR.

MODEL No. 18

Is without exception, equal to any car manufactured.

Beautiful in
Design, Finish
and Style



Perfect in
Materials, Work-
manship, and
in
Operation.

We have one of the Model 18 Cars in stock. Will
be pleased to exhibit to any one
interested.

NEW YORK EXPORT AND IMPORT COMPANY
45, KIANGSE ROAD, Shanghai.

22nd Jan., 1904.

Figure 4.1: Car engine advertisement (1904)

This car engine was very popular among drivers in Britain.

Source: *The North China Daily News*. January 16, 1904.

¹⁵³ *The North China Daily News*. January 16, 1904.

“Automobiles: Tonneau and Runabout Cars in Stock. Unsurpassed in finish, workmanship construction of Motor and all essential parts. New York Export and Import Company, 45 Kiangse Road, Shanghai, 20th May, 1904.”¹⁵⁴

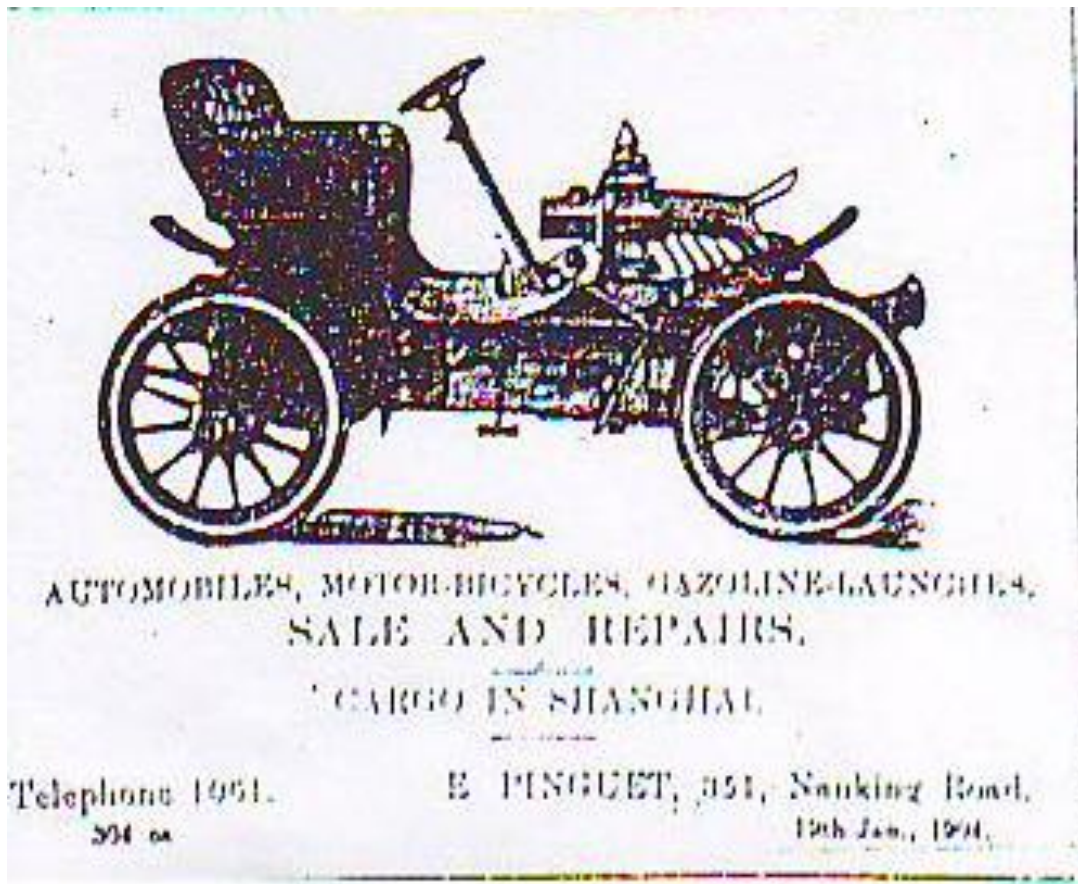


Figure 4.2: Automobile advertisement (1904)

Many automobiles of the early 20th century were open-air vehicles that did not have a roof.
Source: *The North China Daily News*. May 31, 1904.

Information and news of where to purchase automobiles, what types of automobiles were available appeared in the advertisement section of *The North China Daily News* or through the word of mouth and referrals among foreigners in the International Settlement. The cars had arrived from Europe or the United States, and the quantity of automobiles arriving in Shanghai through the export and import companies continued to increase as demand for automobiles increased significantly. During the first decade of the 20th century, automobiles were considered

¹⁵⁴ *The North China Daily News*. May, 31, 1904.

safe to drive on Shanghai's newly constructed and wider roads. The popularity of automobiles can contributed to being able to carry multiple passengers such as a family together, the quicker speed to get from place to place, and direct pick-ups and drop-offs for passengers.

With the arrival of automobiles, the Traffic and Licensing Committee of the Shanghai Municipal Council passed a series of new laws and regulations in 1916 to ensure the safety of drivers and passengers. These include:

“Every person in charge of a vehicle shall keep on the left hand side of the road and when passing other vehicles, shall do so on the right hand side.”

“Every pedestrian and every person in charge of a vehicle shall promptly obey the signals of the Police engaged in regulating the traffic, and must stop at once either when required to do so, or when any accident has occurred in which such pedestrian or person is concerned.”

“No person shall expectorate in or upon any footpath or public vehicle.”

“Every person in charge of slow and heavy traffic shall keep to the sides of the road, leaving the centre for fast traffic.”

“Every person in charge of a vehicle when passing over a bridge or crossing or when turning a corner, shall slow down, and when turning a corner to the left shall do so as sharply as possible, or when to the right, he shall take a good sweep.”

“No person in charge of a vehicle shall approach a crossing on the wrong side of the road, or attempt to pass other vehicles going in the same direction when a good view ahead cannot be obtained.”

“Every person in charge of a vehicle proceeding along any road when wishing to stop or turn to right or left shall raise his hand so as to be visible for a few seconds to the traffic concerned thereby.”

“Every person in charge of a vehicle when taking up or setting down passengers shall draw up his vehicle as near the footway as possible.”

“No person in charge of a vehicle shall keep such vehicle standing at the entrance to any building, store, or residence, after the occupants have alighted, in such a manner as to block the approach to subsequent arrivals, and impede the passing traffic. The person in charge of such vehicle shall move on to a sufficient distance to leave the approach to the entrance clear, shall take up such position as may be appointed by the Police.”

“No person in charge of a vehicle shall keep such vehicle standing in the narrow section of the Nanking Road between Kiangse Road and Szechuan Road.”¹⁵⁵

Laws were strictly enforced to ensure the safety of both the drivers and the pedestrians on the road. After the laws and regulations were implemented, traffic accidents reduced significantly.

In the late 1920s, the detachable wheel was introduced as an attempt to upgrade the motor tires used. *The North China Daily News* reported that the detachable wheel is the solution to the “reliability and convenience of the medium pressured types that had “wheel wobble”.

A newspaper article promoting the “Tyres for 1927” advocated “the adoption of low pressure tyres, either of the full balloon or semi-balloon type” to fit easier to the covers of the wheel. A major improvement is the well-based grim better suited for racing at high speeds. Low pressure tires were beginning to be replaced by medium pressure tires. This new form of tires had a positive affect on the steering mechanism of the “wheel wobble”.¹⁵⁶

There were numerous problems associated with the old tires that needed to be upgraded. The newer pressure tires allowed the pattern steering gear to be much lighter than its older predecessors, and the connexions of steering gear are easier to adjust. As a result, the ratio of turns of the steering wheel to the range of steering lock would be higher. The security bolts had been almost obsolete. The newer cover would be capable of holing itself and its tube in position, and the rider will not fear accidents on bumpy surfaces. The all rubber treads can hold its own but there is a problem where unpleasant sounds or noises inevitably occur on certain surface

¹⁵⁵ “Report of the Traffic and Licensing Bye-Laws Committee-Appointed at the Ratepayers’ Meeting of March 21, 1916.” Shanghai: Printed by Kelly and Walsh, Limited., 1916. Shanghai Municipal Archives: U1-16-184.

¹⁵⁶ *The North China Daily News*, December 10, 1926.

terrains. Expanding rims, which facilitated the replacement of a new cover and tube, have been made stronger.¹⁵⁷

In the same newspaper published that day, an advertisement of the new British motor car appeared. Auto shows, which showcased the newest editions of cars, had become popular in Shanghai. The British motor cars that had already debuted in Britain were on their way to China in large quantities. Booking targets for a total of 250,000 cars of the 1927 models were to be made, with many of them shipped to British colonies around the world. The motor car began as a luxury item for the wealthy, but gradually the British manufacturers revised their designs and overhauled their production methods as demand for automobiles increased. British automobile manufacturers considered the leading points of a desirable car to be “minimum initial cost, smooth running, simple and efficient control, economy in fuel consumption and upkeep, comfort combined with attractive design, and a good life in longevity and durability”. One of the most important triumphs of British automobile engineering had been the rapidity in which the costs of manufacturing had been lowered. The decreases in production costs allowed larger quantities of automobiles to be manufactured, and for the prices of automobiles to drop. The annual automobile shows were the best places to test consumer interests, and to determine which brands or which types of cars were most welcomed by potential buyers.¹⁵⁸ Automobile companies kept close observations of the consumers’ response to each type of car and each model. This allowed the motor industry to modify their models each year based on demand and consumers’ feedback.

American made automobiles also made its appearance in Shanghai during the early 20th century. During the first eight months of 1925 exports of American cars and trucks was the highest in history. According to an article in *The North China Daily*, American automobiles

¹⁵⁷ *The North China Daily News*, December 10, 1926.

¹⁵⁸ *The North China Daily News*, December 10, 1926.

seemed to be outdistancing European competition and gaining a firmer hold on the world market, especially in China.¹⁵⁹

Various automobile companies bought advertisements in newspapers that touted the high quality and durability of their brands during the 1920s. A special section called “Motor Car Buyers Guide” appeared in *The North China Daily* with descriptions of each brand and the locations of car dealerships:

“Packard: Packard perfection is attained by continuous improvement, the result of unremitting research and experiment. Two outstanding developments now incorporated in every Packard car insure the crank case oil against dilution and the proper amount of lubricant to forty-five separate places on the chassis. The first operates automatically, the second by a simple plunger action on the dash. Precision of workmanship is thus protected by a minimum amount of effort. Packard Inc, USA. 18 Avenue Edward VII, Shanghai.”

“Chevrolet: An Economical Car-First Cost and Last. Hartzenbusch Motor Co., 131 Avenue Foch West.”

“Ford: The Logical Car for Shanghai. Bills Motors, Federal Inc, USA. Authorized Dealers: Avenue Edward VII and Thibet Road.”

“Daimler (British). Fitted with this wonderful Sleeve-Valve Engine. The Auto Palace Co., 27 Avenue Edward VII.”

“Rover: An all-British Car: Combing Appearance, Economy & Durability. A trial will convince you. Selling agents in Shanghai. Shanghai Motor Sales Corporation, 151 Bubbling Well Road.”

“Jowett: The Big Small Car. Built for Today’s Motoring Needs. 837-845 Avenue Edward VII, 151-D Bubbling Well Road.”

“Singer: The Car That Looks After Itself. Shanghai Service Co., 98 Weihaiwei Road.”

“Essex Motor Cars: Closed Car Comfort at Open Car Cost. Hudford Motors, 25 Rue Conty.”

“Morris, Oxford and Cowley Cars at the New Reduced Prices. Demonstrations with pleasure. The Auto Palace Co, 27 Avenue Edward VII.”

“Fiat: The Car of International Reputation. The Auto Castle, 242/4 Avenue, Joffre.”

¹⁵⁹ *The North China Daily News*, December 10, 1926.

“Dodge Brothers Motor Car: Consistently Good. China Motors, Federal Inc, USA.”

Car companies found advertisements in the newspapers to be extremely important in marketing their brands to potential customers. Advertisement spaces in the newspapers were highly sought after. Besides cars, auto parts such as engines, tires, and oil were also advertised in the newspapers:

“Robert Bosch A.G. Stuttgart. “The sign of quality”. Bosch Horn: Absolutely dependable and most pleasing. Large and medium sizes are supplied with choke-switches to produce two distinct tones. Loud tones for country drive, low tone for town drive. Keep the choke-switch on low tone position, give the button a short touch, use horn only when it is really and absolutely necessary. Obtainable from all dealers.”

“Pratt Motor Spirit: “From the Golden Pumps”. Socony Motor Oils, Standard Oil Company of New York.”

“Goodyear Balloon Tyres: Goodyear Means good wear.”

“Put the BEST into your car and get the best out of it: “SHELL”. Motor Spirit and Lubricating Oils: Give your car its whole power output-not merely a part.”¹⁶⁰

By the late 1920s, American brands such as Chrysler and Ford were becoming the most common brands of automobiles in China. This can be attributed to both the American system of mass production, which resulted in decreases in prices¹⁶¹ as well as constant marketing and advertisements. Chrysler took out lengthy full page ads in *The North China Daily News* promoting their latest models with pictures and descriptions to convince prospective buyers of their products:

“The New, Lower-Priced Chrysler Six- Touring Car, Roadster, Sedan, Coach, Coupe. Walter Chrysler now presents the new Chrysler Six-the latest product of Chrysler engineering. Remarkable power and performance. Lightning acceleration. Extraordinary gasoline economy. The beauty of Chrysler dynamic symmetry. Genuine Chrysler quality and long life. Riding ease which only Chrysler gives. The supreme safety of four-wheel

¹⁶⁰ *The North China Daily News*, December 10, 1926.

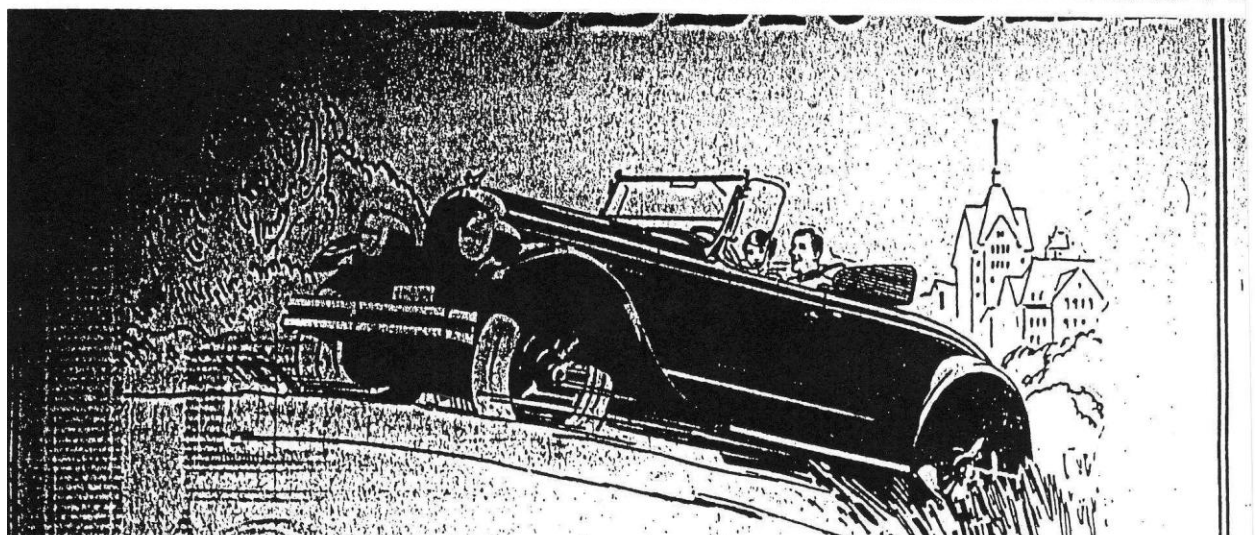
¹⁶¹ Hounshell, David. *From the American System to Mass Production -- 1800-1932*. Baltimore: Johns Hopkins University Press, 1984.

Hydraulic Brakes. Oil-filtered and air-cleaner. Seven-bearing crankshaft. Full pressure lubrication. Full pressure lubrication. Extraordinary strength. Roomy, luxurious bodies.”

“Presenting the New Chrysler Four. Speed with comfort. No rattle or shake. Brilliant, flashing Chrysler pick-up—far finer than any car of equal price. 25 miles to the gallon-practical thrift that has never been accomplished with such performative results. Full tired all-steel bodies. Seats wide and easy. Every detail is planned to give you the finest riding and greatest comfort.”

“Walter P. Chrysler Develops a New Manufacturing Principle-Standardized Quality. Chrysler standardization of quality goes back to the sources of raw materials; it governs the very minutest operations; it makes certain that every unit is produced with the finest precision standards’ under the most rigid inspection; it even moulds the manufacture of accessories.”¹⁶²

¹⁶² *The North China Daily News*, December 10, 1926.



WALTER P. CHRYSLER now presents the new Chrysler Six (Model H) — the latest sensational product of Chrysler engineering—the first Chrysler Six at so low a price.

At last, all the supreme value and performance you naturally expect from Chrysler, in a size and at a price that revolutionizes values and quality among lower priced Sixes.

Remarkable power and performance. Lightning acceleration. Extraordinary gasoline economy. The beauty of Chrysler dynamic symmetry. Genuine Chrysler quality and Chrysler long life. Riding ease which only Chrysler gives. The supreme safety of Chrysler four-wheel Hydraulic Brakes. Oil-filter and air-cleaner. Seven-bearing crankshaft. Full pressure lubrication. Extraordinary strength. Roomy, luxurious bodies.

The lowest priced Six ever built which combines all these fine car features. The car which removes the price obstacle—the only hindrance to the fulfillment of your desire to own a Chrysler Six.

Test for yourself what this new Chrysler can do—demonstration will prove every claim we make for it.

TOURING CAR

ROADSTER

SEDAN

COACH

COUPE

Figure 4.3: Chrysler advertisement (1926)

The American automaker Chrysler had become a popular brand throughout the world by the 1920s.

Source: *The North China Daily News*, December 10, 1926.

After Chrysler's aggressive marketing efforts, Ford Motor Company began to place full page ads in daily newspapers to promote their new models as well.

“For Safe Comfortable Driving: New Fordor Sedan. The new Fordor Sedan is conspicuous among these motor cars. Its smart low lines and beautiful two-tone colouring compel admiring attention wherever it is seen. Moreover, there is a mechanical perfection combined with its exterior beauty that is not excelled by any other make of car. Light, flexible handling in congested traffic, remarkable acceleration. Houdaille hydraulic shock absorbers to assure comfortable riding, non-shatter Triplex windshield glass, and a 6 unit completely enclosed brake system for safety are a few of the features that make riding in the new Ford a real joy. Arrange with our dealer today for a demonstration ride. Ford Motor Company Exports, Inc. Shanghai Price: Tls 1, 1925 (including Bumpers & Extra Tire.”¹⁶³ (1 Tael= 601.866 mg fine gold or US \$0.40. Price of Fordor Sedan at 1,925 Taels= U.S \$770).¹⁶⁴

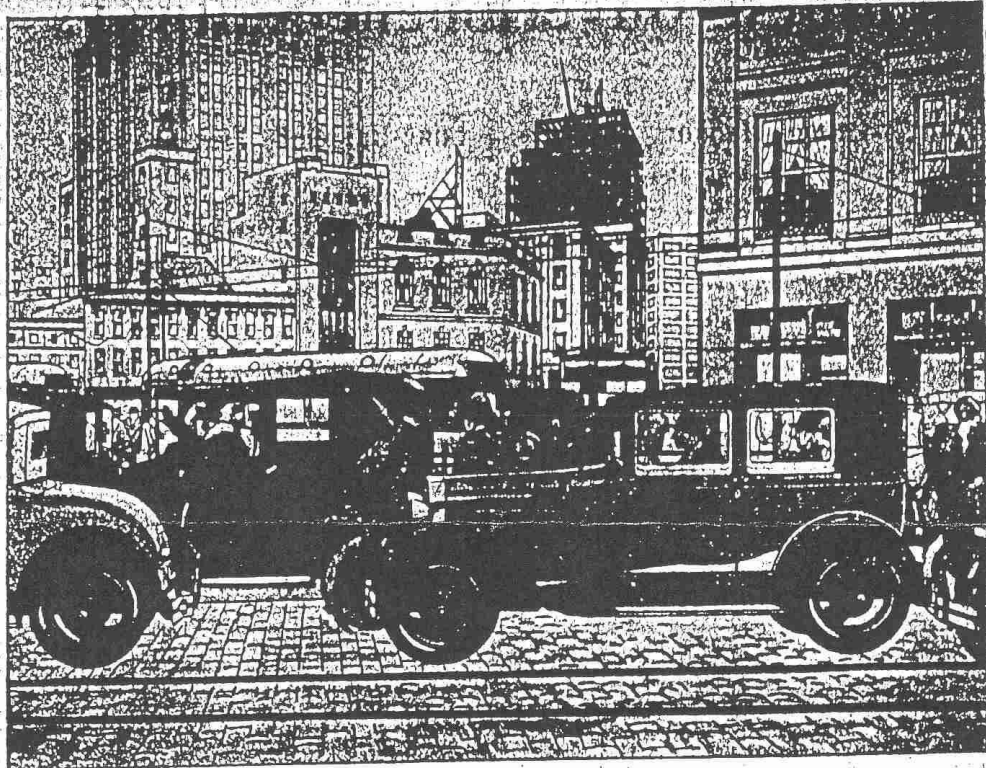
¹⁶³ *China Weekly*, May 18, 1929.

¹⁶⁴ “Mingguo Zhengfu Zhanzheng Shi Jin Zhengce.” (Gold policy during the war period under the Republican government regime). http://www.chinamil.com.cn/site1/big5/ztpd/2005-10/14/content_315032.htm

China Weekly
5/18/1929
中華郵政特准掛號認爲新聞紙類

Registered at the Chinese Post Office
as a newspaper for transmission with
special marks privileges in China.

FOR SAFE COMFORTABLE DRIVING



NEW FORDOR SEDAN

Shanghai Price Tls. 1,925 (including Bumpers & Extra Tire)

AUTOMOBILES of commanding appearance crowd the streets of every city throughout the world.

The new Fordor Sedan is conspicuous among these motor cars. Its smart low lines and beautiful two-tone colouring compel admiring attention wherever it is seen.

Moreover, there is a mechanical perfection combined with its exterior beauty that is not excelled by any other make of car. Light, flexible handling in congested traffic, remarkable acceleration, Houdaille hydraulic shock absorbers to assure comfortable riding, non-shatter Triplex windshield glass, and a 6-unit completely enclosed brake system for safety are a few of the features that make riding in the new Ford a real joy.

Arrange with our dealer to-day for a demonstration ride.



Ford Motor Company Exports Inc.

Figure 4.4: Ford advertisement (1929)

Henry Ford's assembly line created the mass production of cars, and lowered the prices of Ford automobiles.

Source: *China Weekly*, May 18, 1929.

Ford Motor Company published a financial statement of different models and years of their cars in China. A variety of models in year and cost were available to be purchased:

Table 4.1

SUMMARY-FORD CARS

1935-1937

Make & Number	Year	Total Cost Per Year (US\$)	Cost Per Mile Per Year
1929 Model A Tourer 8112	1935	922.26	0.075
	1936	993.18	0.089
	1937	484.35 (6 months)	0.086
1929 Model A Sedan 8620	1935	1,203.26	0.096
	1936	1169.86	0.083
	1937	1266.55	0.096
1928 Model A Sedan 812	1935	818.38	0.069
	1936	1,201.52	0.086
	1937	520.97 (6 months)	0.071
1928 Model A Tourer 8570	1935	282.14	0.014
1929 Model A Tourer 4206	1935	489.85	0.074
	1936	508.2	0.113
	1937	827.53	0.103
1929 Model A Tourer 4611	1935	705.59	0.077
	1936	1,201.31	0.145
	1937	672.07	0.094
1930 Model A Couper 8556	1935	948.47	0.081
	1936	1,311.32	0.142
	1937	1,137.26	0.096
1931 Model A Sedan 1719	1935	892.86	0.088
	1936	1,062.35	0.083
	1937	1,393.01	0.097
1931 Model A Sedan 5009	1935	603.69	0.1
	1936	812.44	0.07
	1937	1,116.52	0.074

		Table 4.1 Continued	
1931 Model A Sedan 4730	1935	1,103.23	0.085
	1936	1,076.02	0.081
	1937	1,087.59	0.087
1935 Model C Sedan 8570	1935	358.11 (4 months)	0.067
	1936	706.6	0.055
	1937	1,229.65	0.126
1937 Standard Plymouth Sedan 4730 ¹⁶⁵	1937	506.21	0.107

Ford trucks became popular in Shanghai as heavy supplies could be loaded up and carried in the back trunk. A number of truck models were introduced in the car dealerships during the 1930s.

Table 4.2
SUMMARY-TRUCKS
1935-1937

Make & Number	Year	Total Cost Per Year (U.S.\$)	Cost Per Mile Per Year
1931 Ford 3 Ton Truck 26	1935	830.07	0.183
	1936	546.98	0.146
	1937	1,322.97	0.232
1931 Ford 3 Ton Truck 27	1935	1,738.27	0.391
	1936	841.76	0.126
	1937	1,675.66	0.169
1931 Ford 3 Ton Truck 16362	1935	980.27	0.239
	1936	1,557.41	0.411
	1937	832.34	
1933 Ford 15 cwt 15944	1935	743.63	0.095
	1936	1,066.42	0.129
	1937	1,271.35	0.132
1934 Ford 15 cwt 15942	1935	545.3	0.089
	1936	1,066.42	0.129
	1937	1,271.35	0.132
1929 Ford 15 cwt Passenger Van 15945	1935	704.97	0.08
	1936	861.6	0.106
	1937	1,123.41	0.091

¹⁶⁵ "Summary-Ford Cars: 1935-1937." U1-16-405. Shanghai Municipal Archives.

		Table 4.2 Continued	
Morris Commercial 1933 30 cwt 16454	1935	383.31	0.114
	1936	702.51	0.146
	1937	923.44	
Morris Commercial 1932 30 cwt 15799	1935	376.97	0.205
	1936	879.13	0.132
	1937	1,797.07	0.131
Morris Commercial 1932 30 cwt 16426	1935	651.07	0.126
	1936	667.23	0.132
	1937	1,134.52	0.139
Morris Commercial 1932 30 cwt 16429	1935	677.62	0.1
	1936	842.58	0.129
	1937	1,431.95	0.156
Commercial Raider 1934 30 cwt 15941	1935	587.51	0.084
	1936	862.83	0.11
	1937	913	0.154 ¹⁶⁶

After automobiles became common in Shanghai, a plethora of brands, models, types, and sizes of cars appeared in Shanghai. There were numerous car dealerships that demonstrated the functions of cars available or allowed potential customers to take a test drive. At first, European cars dominated the auto industry but gradually American companies such as Chrysler and Ford increased their presence in the Shanghai auto market through aggressive marketing in newspaper advertisements. As the prices of cars dropped, more buyers could afford automobiles. Nevertheless, cars remained a luxury item in Shanghai given the crowded space, traffic congestion, and limited parking spots available. It was mostly the wealthy foreigners who owned personal automobiles.

¹⁶⁶ "Summary-Trucks: 1935-1937." U1-16-405. Shanghai Municipal Archives.

The Tram and the Trolley

On March 5, 1908, the Shanghai Tram Company introduced the first tram (*yougui dianche*) in the International Settlement. The tram was a British introduction that brought about revolutionary changes in the public transportation systems of Shanghai.¹⁶⁷ Previously, methods such as the wheelbarrow, rickshaw, sedan chair and bicycle are man-powered vehicles that required the muscles of the puller or the rider. With the introduction of the tram and the trolley (*wugui dianche*), public transportation vehicles made the transition from man-power to machine-power, and allowed for a far greater number of people to ride in the same vehicle than ever before. The major difference between the tram and the trolley is the tram needed tracks to move while trolleys do not need tracks.

Unlike other forms of transportation vehicles, trams and trolleys were not first introduced to Shanghai. Trams first appeared in Tianjin in 1905, after the jointed owned European Tianjin International Tram Company signed a contract with the Qing government in 1904. Trams appeared within the walls of the old city of Tianjin, with four initial lines going from north, east, south, and west. Eventually, five new tram lines were built in the old city and the foreign concessions controlled by the Austrians, Italians, Japanese, French and Russians. The original trams were painted white, and later trams were painted red, blue, green, yellow, and flowery to distinguish their routes.¹⁶⁸ The successes of the trams in Tianjin may have influenced the British to introduce trams to Shanghai a few years later.

The earliest tram had a hard steel shell, painted in green, and weighed about 20,000 pounds, with the shell weighing about 8,000 pounds. It moved along slowly and many residents

¹⁶⁷ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.54-55.

¹⁶⁸ Liu, Haiyan. "Dianche, Gonggong Jiaotong Yu Jindai Tianjin Chengshi Fazhan." (The Tram, Public Transportation as part of the City of Tianjin's Modern Development). Shilin: Shanghai Shehui Kexueyuan Lishi Yanjiusuo Chuban, 2006/3: p.20-25.

were afraid to ride in it. The British formed the “Shanghai Zhizao Dianqi Youxian Gongsi” in 1905, with the intention of testing the tram, which had been in use in Britain since the late 19th century in Shanghai. It took three years for the construction of tram tracks and in 1908, when the tracks were finally completed; the tram was officially introduced to the city. The tram had three major lines: (1) from Jingan Temple to Hongkou Park, covering an area of 8.6 km; (2) Jingan Temple to #16 pu, covering an area of 5.9 km, and (3) from #16 pu to Yangshupu, covering an area of 3.3 km. There were a total of 65 trams in operation, with each tram having first class and third class. The fares are for 1.5 km, 6 cents for the first class, and 2.5 cents for third class. A typical tram had six seats in the first class, about forty seats in the second class, and no seats in the third class: passengers must sit on the floor.¹⁶⁹

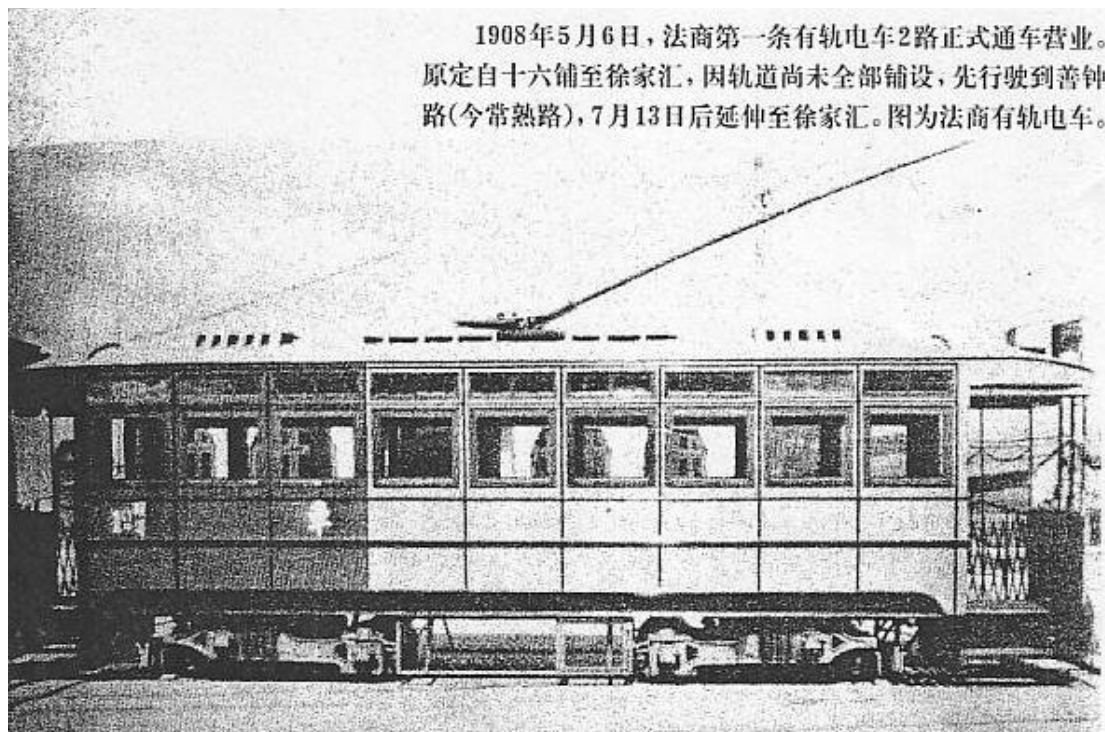


Figure 4.5: Earliest tram introduced in International Settlement in 1908
Trams required tracks and electrification.

¹⁶⁹ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.57-58.

Source: Wang, Liquan. *Shanghai Shi Lunzi Zhuan Chulai De* (The Wheels of Shanghai). Shanghai: Xuelin Chuban She, 1999.

While the British owned and operated the trams, with the headquarters based in London, the Shanghai Tram Company had a permanent office in Shanghai, located at #185 Suzhou Road. This office served as the operation and management center where administrative and technical issues would be taken care of. The trams quickly became an instant success due to the fact that it could transport over a hundred people at once. In 1913, the Shanghai Municipal Council approved the installation by the Shanghai Electric Construction Company of a system of rail-less electric cars.¹⁷⁰ The number of trams increased from 65 when they were first introduced in 1908 to 312 in 1932, a fivefold increase. The number of passengers who rode the trams increased from 11,772,715 to 108,845,656 during that same time, an increase of nine times. The total distance covered increased from 1,979,001 miles to 9,407,656 miles, a five times increase. The number of lines increased from three to twelve during those 24 years.¹⁷¹

By 1937, there were 10 major tram routes in the International Settlement connecting downtown to residential areas. Designated stations were located at busy streets, parks, and connection points. The routes were:

Table 4.3

Number	Starting Point	End Point	Distance (km)
1	Jingan Temple	Hongkou Park	8.6 km
2	Jingan Temple	#16 Pu	5.9 km
3	Carter Road	Dongxin Bridge	2.8 km
4	Tilan Bridge	French Concession Border	3.3 km
5	North Train Station	Laoximen	2.3 km
6	North Train Station	North Henan Road	6.6 km

¹⁷⁰ "Tramways". *The Municipal Gazette*, Thursday, June 12, 1913, p.142.

¹⁷¹ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.59-60.

		Table 4.3 Continued	
7	North Train Station	Tilan Bridge	5.8 km
8	Yangshupoo Road	#16 Pu	8.4 km
11	Huangputan Road	Hongkou Park	4.0 km
12	Tilan Bridge	Jingan Temple	4.6 km

The French Concession had nine major tram lines in 1937.

Table 4.4

Number	Starting Point	End Point	Distance (km)
1	#16 Pu	Fukailin Road	7.2 km
2	#16 Pu	Xujiahui	8.6 km
3	Xiaodongmen	Laoximen	2.5 km
4	Haige Road	Tilan Bridge	5.7 km
5	Lujiawan	International Settlement Border	3.5 km
6	#16 Pu	Lujiawan	5.1 km
7	#16 Pu	Haige Road	6.4 km
8,9	#16 Pu	Waiyangjing Road	1.1 km
10	#16 Pu	Lujiawan	4.9 km

The Chinese city installed tram lines later and had only four lines in 1937.

Table 4.5

P150 Table 3.5

Number	Starting Point	End Point	Distance (km)
1	Gaochang Temple	Xiaodongmen	4.8 km
2	Heping Road	Zhaozhou Road	8.9 km
3	Laoximen	Mingguo Road	5.1 km
4	Gaochang Temple	Zhaozhou Road	3.9 km ¹⁷²

The trolley, known as *wugui dianche* first appeared in 1914. Unlike the tram, the trolley did not need the tracks and could drive directly on the roads. Also known as the trackless trolley,

¹⁷² Xue, Liyong (editor). *Jiu Shanghai Zhujie Shihua* (Old Shanghai Settlement History). Shanghai Shehui Kexueyuan Chubanshe, 2002, p. 121-124.

this vehicle began operation on Nanjing Road.¹⁷³ The trolleys were not as numerous as the trams because few roads were completely paved at the time. Instead, the trolley served as a complement to the tram rather than a substitute. In areas where it was difficult to built tracks, or where there were relatively well-maintained and paved roads, trolleys were used. In other areas where roads were unpaved, or if tracks had already been built, trams were put into operation.

Seeing the successes of the trams in the International Settlement, the French introduced the trams into the French Concession in 1911. During the first year, there were 28 trams in operation; in 10 years it had increased to 38. By 1937, there were over 100 trams with six major lines and 38 trolleys with two lines, and gross revenue of 660 million Yuan. Unlike the settlements, the distances the trams cover are limited to only 12.5 miles.¹⁷⁴ Trams also made its way into the Chinese section, which included Hunan, Zhabei, Huxi, Jiangwan, and Zhenru districts. In 1913, the Huashang Dianqi Gongsi was established with the first tram operating in Nanshi on August 11. Throughout the 1920s and 1930s, the trams provided easy access to the masses in the Chinese sections of the city. Unfortunately, the Japanese bombing of Zhabei in 1937 destroyed much of the tram tracks.¹⁷⁵

¹⁷³ Xiong, Yuezhi (editor). *Shanghai Tong Shi*. (The History of Shanghai). Chapter 5: "Jiaotong, youdian yu chengshi jichu shishe de wanshan". The 8th edition: *Mingguo jingji*. Shanghai Renmin Chubanshe, 1999: p.187.

¹⁷⁴ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.62-63.

¹⁷⁵ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.63-66.

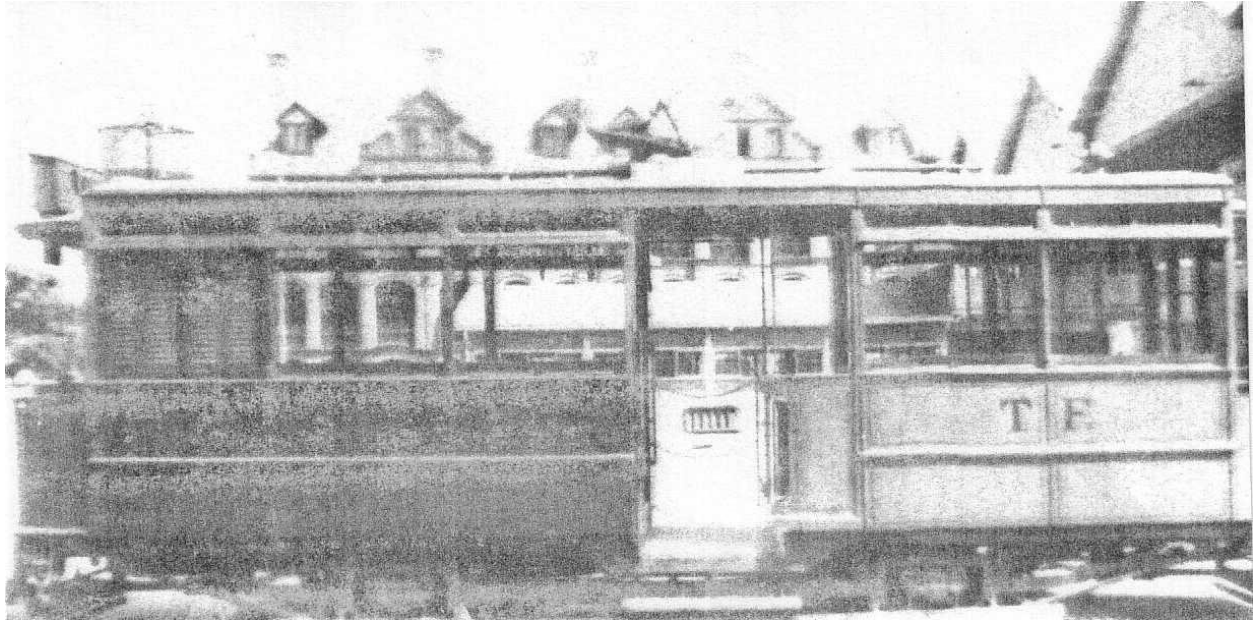


Figure 4.6: Tram in French Concession (1911)

Trams were introduced into the French Concession after the French had seen trams operate in the International Settlement.

Source: Wang, Liqun. *Shanghai Shi Lunzi Zhuan Chulai De* (The Wheels of Shanghai). Shanghai: Xuelin Chuban She, 1999.

Trams and trolleys became very important transportation tools during the 1920s and 1930s. The management systems differed in the settlement, concession, and Chinese district of the city. Each company painted its own trams and trolleys in different colors to signify the different routes and fees of each vehicle. In the settlements, the Shanghai Dianche Gongsi painted the vehicles into green and white colors to distinguish the first class and third class seats. The head of the vehicle, or first class would be colored green, and prices would be much higher, while the rest of the vehicle would be colored white, to indicate passengers there are third class. Third class passengers paid only a small fraction of the ticket prices of first class passengers. There was no second class section on these vehicles. In the French concession, trams and trolleys

were colored brown and green, mainly to indicate the different directions of the routes. In Nanshi district of the Chinese section, the Huashang Dianqi Gongsi operated green and red vehicles.¹⁷⁶

In 1931, there were 21 tram or trolley routes in the International Settlement and French Concession, and 4 routes in the Chinese section, primarily in Nanshi. Many Chinese companies hired German engineers to help them expand their routes. In Nanshi, new tracks were installed to connect Zhonghua Road, Laoximen, Hu-Hang train station and Gaochangmiao Road together. By 1937, four new routes were completed in the Chinese section, with a total length of 23.24 km, and 54 trams or trolleys were in operation.¹⁷⁷ The success of the tram and the trolley can be linked to the gradual expansion of the total surface area of the International Settlement and the French Concession during the early 20th century. From 1914 to 1915, the settlement occupied a total area of 52,570 *mu* (8658.3 acres) and the concession had an area size of 15,124 *mu* (2490.9 acres); both significant increases from their initial encroachments during the late 19th century.¹⁷⁸ A more spread out area required faster forms of transportation to go from place to place, and the increasing population required a form of mass transport unlike the rickshaw or bicycle that could transport large numbers of people at once. These two factors contributed to the increasing dependences of the tram and trolley as public transportation tools.

¹⁷⁶ Shanghai Xiaolan Ben, 1931: p.299 in Xiong, Yuezhi (editor). *Shanghai Tong Shi*. (The History of Shanghai). Chapter 5: "Jiaotong, youdian yu chengshi jichu shishe de wanshan". The 8th edition: Mingguo jingji. Shanghai Renmin Chubanshe, 1999: p.187

¹⁷⁷ Jingdai Shanghai Shi Yanqiu, Shanghai Renmin Chubanshe, 1990: p.489 in Xiong, Yuezhi (editor). *Shanghai Tong Shi*. (The History of Shanghai). Chapter 5: "Jiaotong, youdian yu chengshi jichu shishe de wanshan". The 8th edition: Mingguo jingji. Shanghai Renmin Chubanshe, 1999: p.188.

¹⁷⁸ Xiong, Yuezhi (editor). *Shanghai Tong Shi*. (The History of Shanghai). Chapter 5: "Jiaotong, youdian yu chengshi jichu shishe de wanshan". The 8th edition: Mingguo jingji. Shanghai Renmin Chubanshe, 1999: p.184.

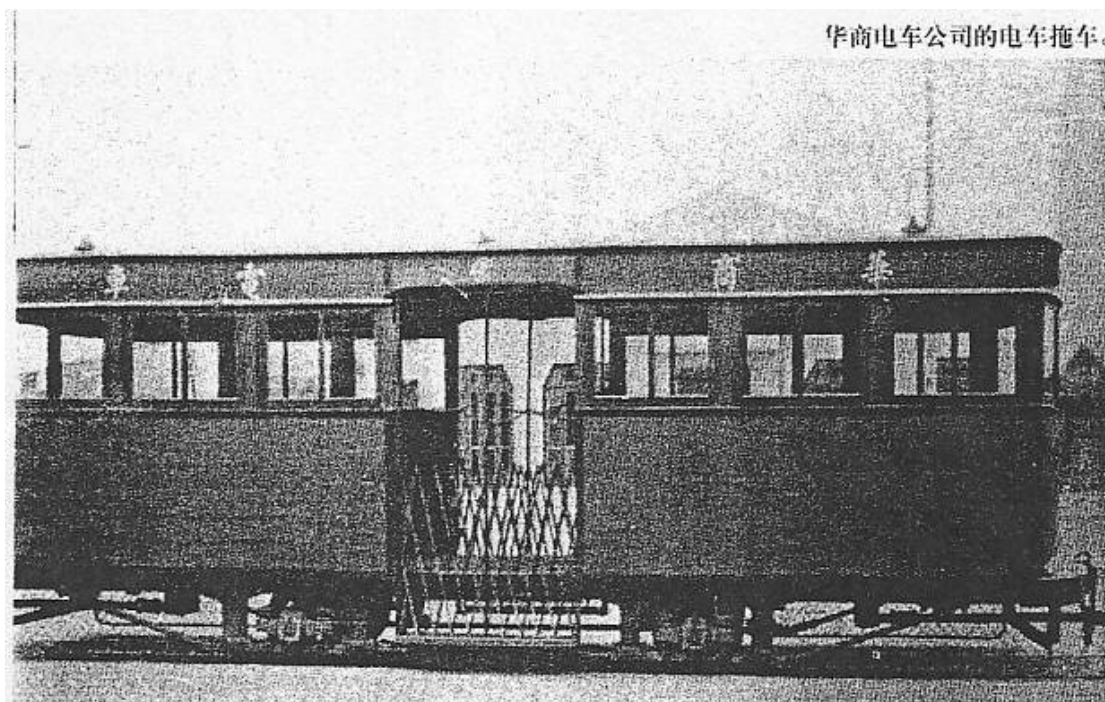


Figure 4.7: Chinese owned tram in the Chinese city

The Chinese introduced trams into their own territory after witnessing the successes in the foreign concessions.

Source: Wang, Liqun. *Shanghai Shi Lunzi Zhuan Chulai De* (The Wheels of Shanghai). Shanghai: Xuelin Chuban She, 1999.

Unlike rickshaw pullers, who earned below average salaries, tram and trolley operators earned significantly higher incomes than most Shanghai workers. By 1936, there were over 20,000 workers in the tram and trolley industries. According to the 1938 “Shanghai Canye Yu Shanghai Zhigong” report, tram and trolley drivers, and ticket collectors earned a minimum of 18 yuan per month and a maximum of 60 yuan per month in the Chinese section. In the French Concession, drivers earned a minimum of 27.7 yuan and a maximum of 55 yuan per month, while ticket collectors earned a minimum of 27.7 yuan and a maximum of 49 yuan. In the International Settlements, drivers earned a minimum of 22 yuan and a maximum of 35.5 yuan, while ticket collectors earned a minimum of 22 yuan and a maximum of 33.5 yuan.¹⁷⁹ It’s

¹⁷⁹ Zhu, Banxing. “Shanghai Canye Yu Shanghai Zhigong”, 1938 in Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p. 68.

surprising to note that the ticket collectors earned about as much as money as the drivers. It's clear that the average salaries for tram and trolley workers would place them at the upper middle class range of Shanghai's population. This could be explained by the fact that the trams and trolleys can carry so many passengers at once, and since each passenger must pay a fee for the fare, revenues from ticket fares can be quite high. Unlike the rickshaw puller, who can only charge a fee for one passenger at a time, trams and trolleys were much more lucrative businesses due to its ability to mass transport so many people. Unlike the rickshaw puller who relied only on his muscles, the driver of the trams and trolleys would be considered a skilled worker, someone who can operate a complicated vehicle.

There were numerous incidents of worker strikes over demands for better working conditions, safety standards, and higher wages. The French Tramway Strike of 1930 began as a public utility concern. The strike began on June 20, 1930 when only the workers in the shops walked out, after their demands for increase of wages were not met by their employers. Later it spread, and the tramway motor men were involved. The tram company owners did their best to maintain a skeleton service with the protection of police on the trams. On August 11, the strike expanded to many office workers throughout the French Concession. Protest was raised by the ratepayers, who were angry about paying extra taxes. The strike was not resolved until a representative was sent by the French Municipal Council to negotiate and settle the matter. The terms of the settlement were 1) full pay of wages to all workers during the strike, 2) \$2.40 increase of pay per month for all workers, 3) release of all workers arrested during the strike, 4) principles of pension, compensation, bonus, and extra pay for tram workers, and 5) the tram

company could not dismiss workers without reason. The agreement was signed on August 14, 1930 and all 1,730 workers involved in the strike returned to work immediately.¹⁸⁰

By the early 1940s, after three decades of success, the tram service encountered a number of challenges and difficulties, most notably the Japanese takeover of the city. In March 1940, the tramcar service north of Soochow Creek had difficulties in continuing their operation. The British-owned Shanghai Electric Construction Company reported that while increased traffic facilities “north of the creek” would be welcomed because of the congestion running in the area, they were skeptical that they would be allowed to resume operations under the same condition prior to the Sino-Japanese hostilities. The Japanese-operated busses had now begun service in the area where previous tram routes had been. The Japanese had opposed the area’s reopening because of the conflict of interests with the Japanese-owned Central China Urban Motor Company.¹⁸¹

In response, the Shanghai Municipal Council approved increases in tramway fares throughout the rest of the International Settlement in June 1940. Fares were to be raised from 3.71 to 5.02 cents per mile for first class passengers and from 2.54 to 3.43 cents per mile for third class accommodation. Consideration was given to the lobbying of the Shanghai Electric Construction Company at a meeting of the Public Utilities Committee and the Council meeting between May 24 to May 29, 1940. The increase was necessitated to offset increased operating expenses and a loss of revenue in “north of Soochow Creek” routes to the Japanese. Under the tramways franchise, the Shanghai Electric Construction Company was entitled to increase its

¹⁸⁰ “The Shanghai French Tramway Strike”. *The China Yearbook 1931*, p. 519.

¹⁸¹ “Tram Service North of Creek Doubtful”. *The North China Daily News*, March 1, 1940.

fare charges up to maximum rates stipulated in the franchise. The revised fare tables were accordingly approved to take place in the settlement beginning in June 1940.¹⁸²

The Shanghai Electric Construction Company continued to increase fares throughout the 1940s. The revised fares come into effect on June 28, 1941 involved an increase from 6.37 to 9.11 cents per mile for first class and 4.87 to 7.29 cents for third class. The Company justified the increased fare by stating that it was necessary giving the rising costs of operation due to the lower exchange value of the local currency, local economic conditions and the effects of war conditions abroad. Since 1937, when the Sino-Japanese war broke out, revenue had failed to keep pace with rising expenditure. The Company's financial data showed that working expenditure increased some 310% from 1937-1941, and electrical energy had increased in price by 423%, while the fare charges only increased 153% during the same time period. The results had been a reduction each year in net profit earned on capital invested dropped from 8.5% in 1936 to 1.3% in 1940. Raising fare prices became the only way to make up for the revenue losses.¹⁸³

After negotiations with the Japanese, tram lines north of Soochow Creek was reopened on Dec. 30, 1941. The Shanghai Electric Construction Company received permission to recommence running trams from the corner of Muirhead Road and Broadway to Lay Road in order to service the dense industry area of the city. This first tram route to commence running in the Hongkou area since the outbreak of the Japanese invasion in 1937 provided a boon to the hundreds of thousands of laborers working in the district covered by the new route. Japanese owned buses still covered the Hongkou area with a skeleton service. The wayside route operated from 7am to 10pm daily and eight trams and trailers were employed. From the time tram service

¹⁸² "Tramway Fares Increase is Approved by Council". *Shanghai Times*, June 1, 1940.

¹⁸³ "Shanghai Electric Construction Co. Ltd.". *Municipal Gazette*, June 27, 1941.

had been discontinued north of Soochow Creek in August 1937 as a result of safety concerns due to Japanese military presence in the area to the reopening in December 1941; lines, rails, and other equipment were kept in a state of repair so that only a few minor finishing touches had to be made by the company in order to re-open after four years of inactivity.¹⁸⁴

Following the resumption of the tram service, the Shanghai Electric Construction Company and Japanese authorities agreed to allow for the resumption of trolleys in the area on January 22, 1942. Trolley service in the area was recalled along with the tram routes in 1937. The resumption of trolleys will cover the routes along the Broadway mansions to North Soochow Road to North Szechuan Road to Range Road. Another trolley line resumed along the Broadway and Yangtzepoo Roads to the Riverside Plant of the Shanghai Power Company.¹⁸⁵

In May 1942, simultaneous with the resumption of tram and trolley service between Hongkou and areas south of the Soochow Creek, the fares in the two areas were adjusted in order to prevent disparity. Tram fares in Hongkou had been charged in military yen. The fare from Garden Bridge to Asia Development 10 sen (military yen). In the Settlement, the fare from the Bund corner of Nanking Road to Yates and Bubbling Well Roads had been 20 cents (Chinese *fabi*). When the two areas are linked by a joint service, the fares were to be equalized. It was planned to lower the fares prevailing in Hongkou and raise the fares in effect at south of Soochow Creek. The fares were part of the unified tram system covering areas north and south of the Creek beginning in 1942.¹⁸⁶ After the Japanese seized the International Settlement after December 7, 1941, this area became part of the Japanese occupation. The *fabi* currency was made illegal and converted 2 to 1 to the new puppet currency, which sparked inflation.

¹⁸⁴ "Wayside Tram Line to Open This Morning". *Shanghai Times*, December 30, 1941.

¹⁸⁵ "Trolley Cars May Run North of Soochow Creek Soon".

¹⁸⁶ "Tram Service Over Garden bridge Will Be Resumed in June". *Shanghai Times*, May 6, 1942.

On June 5, 1942, two additional routes were opened by the Shanghai Electric Construction Company to provide more accessibility to passengers. Route No. 1 covered Bubbling Well Road to Hongkou Park and Route No. 8 covered the south end of the Bund to Yangtzepoo Point. The inauguration of the new Routes No. 1 and No. 8 unified the Shanghai Electric Construction Company and the Central China Omnibus Company. Starting on June 5, 1942, the transportation companies in both the French Concession and the International Settlement adopted fares in Chinese currency. Previously, tramways had been operating in north and south of Soochow Creek but there was no direct service across Garden Bridge, a main crossing point. The Garden Bridge was cleared by the Japanese military authorities to allow for the unhampered passage of the trams. The Shanghai Electric Construction Company set the end-to-end fare on Route No. 1 from Hongkou Park to St. George's at 70 cents for first class and 45 cents for third class. The fare from Carter Road to the Bund was 50 cents for first class and 30 cents for third class. From Garden Bridge to Hongkou Park, first class passengers paid 50 cents for the ride. From Yangtzepoo point to the south end of the Bund, the two terminal points of Route No. 8, passengers paid 75 cents for first class and 50 cents for third class.

An exchange rate of CRB\$5 to one military yen had been fixed for the currency exchange. The fare in tramways of the Campagnie Francaise de tramways et D'Eclairage Electriques de Shanghai had also been switched to Chinese currency. Chinese fabi notes of \$1 or higher were no longer accepted, as only 10, 20 and 50 cents notes were used. The tramways in the International Settlement installed third class trailers in order to accommodate more passengers.¹⁸⁷

The fares were raised in the French Concession immediately following fare raises in the International Settlement. On June 1, 1942, fares on buses, trams and rail-less trams operating in

¹⁸⁷ "Tram Service Across Creek Resumes Today with Raise in Fares". *Shanghai Times*, June 5, 1942.

the French Concession were raised by a minimum of 100 per cent when fares were posted in the vehicles by the Compagnie Francaise de Tramways et D'Eclairage de Shanghai. Rates for all distances had been doubled in most cases. The fare from Zikawei to the Bund cost \$1.30 instead of 60 cents before. From Yates Road to the Bund, the fare will be \$1.10, and the minimum fare rate of 25 cents was increased to 50 cents.¹⁸⁸

The Bus

The bus, known as (*gonggong qiche*), meaning the public vehicle was first introduced on October 10, 1924 in the Settlement. The first bus went from banks of the Huangpu River to Jingan Temple, running from 7:30 am in the morning to 11:00 pm at night, with a new bus coming every 5-8 minutes.¹⁸⁹ The bus made its first appearance in the French Concession on February 1, 1927, and in the Hunan district of the Chinese section on October 10, 1928, followed by the Zhabei district on November 18, 1928. The number of buses jumped significantly during the 1920s as Shanghai's population increased from 1.28 million in 1910 to 2.64 million in 1927 to 3.70 million in 1935. The early buses were considered expensive as each stop cost 5 cents, and a complete ride of 5 stops cost 20 cents.¹⁹⁰ In the 10 years since the bus first came into existence in 1924 to 1934, the number of buses in operation increased from 28 to 164. In 1934, buses covered a total distance of 5,147,431 miles and carried a total of 37,328,561 passengers. There were a total of 12 lines covering the International Settlement:¹⁹¹

¹⁸⁸ "Fares Raised 100 Per Cent in Concession". *Shanghai Times*, June 1, 1942.

¹⁸⁹ *Shenbao*, October 9, 1924 in Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p. 80.

¹⁹⁰ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.p.80-81.

¹⁹¹ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.83.

Table 4.6

Bus Lines in the International Settlement (1934)

Line	Starting Point	End Point	Distance(km)	Date Began
1	Taofeng Yuan	Hongkou Park	11	1928.2.17
2	Aiduoya Road	Hongkou Park	4.7	1926.3.12
3	Jingan Temple	Beixing Road	7.7	
4	Jiaotong University	Hongqiao Airport	9.5	1928.7.18
5	Aiduoya Road	North Henan Road	2.3	1925.1.1
6	Hongkou Park	Linqing Road	4.2	1927.1.17
7	Jingan Temple	Jiaotong University	3.6	1928.4.4
8	Jiaotong University	Guiyang Road		
9	Jingan Temple	Guiyang Road	13.4	1924.10.9
10	Caojiadu	Linqing Road	12.3	1924.12.1
11	North Train Station	Tilan Bridge	3.1	1933.8
12	Wanhangpu Road	Waibaipu Bridge		1934.12.11

By the early 1930s, there were four major bus companies: 1) the British owned Yingshang Gonggong Qiche Gongsi, which colored the buses yellow and operated in the International Settlement; 2) the French owned Fashang Gonggong Qiche Gongsi, colored gray in the French Concession; 3) the Chinese owned Huashang Gonggong Qiche Gongsi, operated in Zhabei and Baoshan districts; and 4) the Chinese owned Nanshi Gonggong Qiche Gongsi, painted yellow and in operation in Nanshi, Xujiahui, and the southeastern part of the city.¹⁹² At the end of 1932, the British owned bus company had 13 permanent stops and 5 temporary stops along its line, covering a distance of 129.3 km in the settlements.¹⁹³ In addition, there were five direct buses going from Waijing Qiao to Taofeng Yuan, Fanhangdu Road, Kangnaotuo Road, and Caojiadu with no stops in between. Each line had 2 buses that came each day for the direct

¹⁹² Shanghai Xiaolan Ben, 1931: p.300 in Xiong, Yuezhi (editor). *Shanghai Tong Shi*. (The History of Shanghai). Chapter 5: "Jiaotong, youdian yu chengshi jichu shishe de wanshan". The 8th edition: Mingguo jingji. Shanghai: Shanghai Renmin Chubanshe, 1999: p.188-189.

¹⁹³ Jingdai Shanghai Shi Yanqiu, Shanghai Renmin Chubanshe, 1990, p.489 in Xiong, Yuezhi (editor). *Shanghai Tong Shi*. (The History of Shanghai). Chapter 5: "Jiaotong, youdian yu chengshi jichu shishe de wanshan". The 8th edition: Mingguo Jingji. Shanghai: Shanghai Renmin Chubanshe, 1999: p.189.

line. The Chinese owned Huashang Bus Company began operations in 1928, with its initial starting point in Zhabei. By 1934, five major lines had been established going from Zhabei to Jiangwan, Sichuan Road/Qiujiang Road to the bridge at Hengfeng Road, Zhabei to Zhenru, Zhabei to the new municipal government headquarter, and from Zhabei to the new residential areas.

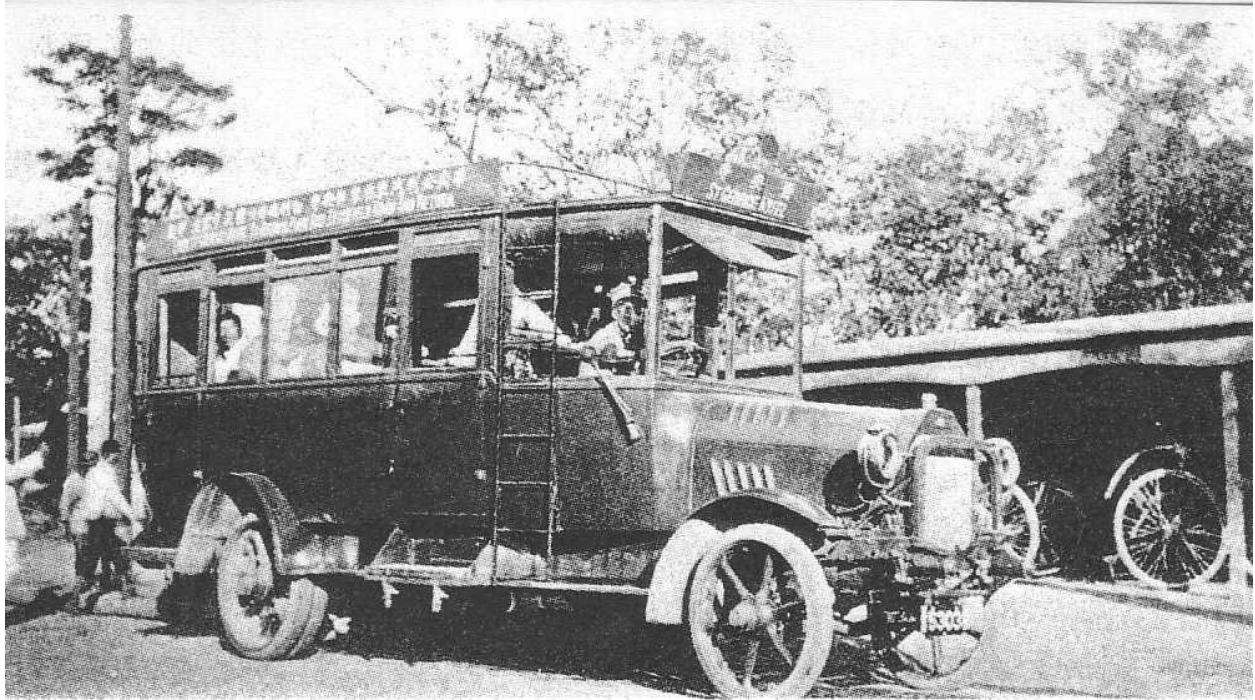


Figure 4.8: Chinese owned bus company (1922)

Private companies operated by Chinese entrepreneurs sought to make profits from supplying transportation to meet consumers' needs.

Source: Xue, Liyong (editor). *Qiu Shanghai Zhujie Shenghuo* (Old Shanghai Concession Lifestyles). Shanghai: Shanghai Shehui Kexueyuan Chubanshe, 2002: p. 125.

Due to its initial successes, and the large number of passengers wishing to ride the buses, the double-decker bus was introduced in 1934 to accommodate more people. A typical double-decker bus could fit 44 people on the lower level and 38 people on the top level, making it a

highly efficient carrier.¹⁹⁴ Like other transportation vehicles, the bus created job opportunities for a new group of drivers. These drivers had to have specific driving licenses and had to be on time at each stop and be skilled at parking these long vehicles. Compared to the trams and trolleys, bus fares were cheaper since the bus charged passengers for each stop rather than for kilometer traveled. Since the distance between each stop usually covered several kilometers, a 5 cents ride on the bus typically covered more distance than the tram or trolley. Unlike the tram or trolley, which separated passengers into first or third class based on fares, the bus was much more egalitarian. There were no designations on the bus that separated passengers or charged higher fees. Everyone who rode the bus was treated like everyone else and paid the exact same fare. While the tram and trolley allowed the wealthy to public flaunt their status by sitting in the privileged first class section in the front, while others had to sit on the floor in the third class section in the back, the bus was a vehicle of equality operated on a first-come, first-sit basis where any passenger could sit if he/she could find an open seat. Passengers who arrived late or if all the seats had already been taken had to stand up and hold on to the rail pole as the bus moved.

¹⁹⁴ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.83-85.



Figure 4.9: Double decker bus

The double decker bus could carry twice as many people and offered passengers on the second floor a scenic view of downtown Shanghai.

Source: Wang, Liqun. *Shanghai Shi Lunzi Zhuan Chulai De* (The Wheels of Shanghai). Shanghai: Xuelin Chuban She, 1999.

A major problem with the buses had been the smoke nuisance that received a lot of complaints from pedestrians. In 1935, the Commissioner of Public Works investigated the smoke pollution problem and forced bus companies to come up with technical alterations to abate the smoke nuisance. The Commissioner had promised financial support if a new type of oil used could reduce smoke emission. As a result, a new and more expensive kind of fuel oil was used by the bus companies starting in late 1935.¹⁹⁵ The China General Omnibus Company, which had become the major bus supplier in the Settlement, reported to the Municipal Council that the perfect combustion of fuel oil in bus engines was more difficult in the winter months because of cold weather. In January and February, the coldest months of the year, the smoke emission from the buses continued to be a nuisance problem. But in other months of the year, smoke emission

¹⁹⁵ "Omnibus Smoke Nuisance". *Municipal Gazette*, November 8, 1935.

could be significantly reduced due to new fuel oil. The Public Works Department was satisfied with the improvements.¹⁹⁶

Bus routes had a significant impact on the commercial developments of the city, as streets close to bus stops tended to have more businesses, stores, and traffic. During the late 1930s and early 1940s, as the Guomindang began to consolidate control over Shanghai, more bus routes were installed that covered a wider range of area for the passengers. Bus routes were longer, and had more intermediate stops along the way than before.

Table 4.7

Bus Lines During the 1940s

Bus Route #	Starting Point	End Point
#1	Zhonghua Road (Laoximen)	Minguo Road
#2	Laoximen	Henan Road
#3	East Zhongshan Road	Kailu Road
#4	South Nanjing Road	Changyang Road
#5	Xujiahui	Zhaojiapu
#6	Kangding Road	Xizhang Road
#7	The Bund	Shanghai Law School
#9	Xujiahui	East Zhongshan Road
#10	Zhongshan Park	Sichuan Road
#11	East Zhongzhen Road	West Zhongzhen Road
#12	Xinmen Bridge	Tilan Bridge
#13	North Train Station	Guohuo Road
#14	Xujiahui Road	Xizhang Road
#15	Xujiahui	North Train Station
#20	Xizhang Road	#2 East Zhongshan Road
#21	Damu Bridge	The Bund
#22	Hengshan Road	The Bund
#23	Xizhang Road	Xujiahui ¹⁹⁷

¹⁹⁶ "Smoke Nuisance From Buses: Council Satisfied Company is Doing its Best". *The North China Daily News*, December 25, 1935.

¹⁹⁷ Shanghai Gonggong Qiche Luxian Tu. (Map and Routes of Shanghai Public Buses). December, 1949. Shanghai Municipal Archives, R1-20-17.

Compared to the earlier bus routes of the late 1920s-early 1930s, these route lines covered much more distance and had more stops. A few locations such as the Bund (particularly along East Zhongshan Road), Xujiahui, the North Train Station, Xizhang Road, and around Laoximen had multiple buses coming and going to facilitate the large number of passengers at these busy stops. The availability and accessibility of buses made commuting much easier for the city's residents, as they could pretty much go anywhere in the city by bus. Transfer points were set up at busy locations such as the Bund, Xujiahui, and Laoximen where passengers could get off one bus line and get on another bus line quickly. The bus routes helped shape the space configuration of the urban landscape by turning a few locations into busy commercial centers for shopping and commerce, or into entertainment areas for leisure. Locations closest to major bus routes benefited the most from an abundance of passengers who got on or got off the buses. These locations became more prosperous and important because of their close proximity and easy access to the bus lines.

The Taxi

The Huanqiu Public Company began renting out automobiles in 1908, signaling the beginning of the taxi as a luxury transportation vehicle. The taxi (*chuzhu che*), meaning “the rental vehicle”, catered to the rich as its fares were well beyond the means of common people. When it first appeared, the fare was 6 Yuan for the first hour, with 4 Yuan for each ensuing hour. The following year, the “Shanghai Zhinan” reported that the typical taxi service cost 5 Yuan for the first hour and 4 Yuan for the next hour. To use the taxi for four hours would cost the rider 15 Yuan, and to rent it for an entire day beginning at 8:00 am would cost 25 Yuan. In 1911, the Oriental Car Company began renting out taxis to foreigners who liked the comfort of the automobile without the stress of finding parking, and who could afford to pay the rental fees.

Instead of charging by the hour, Oriental Car Company charged fares by distance with 60 cents for the first mile, and 15 cents for the next ¼ mile.¹⁹⁸ Compared to other vehicles, the number of taxis remained fairly small as only the wealthy elites could afford the high costs.

Other foreign companies such as the Olivier Motorcar Department., Hanseo Magill Company, and Central Garage Company all joined the taxi business in 1911, seeking to rent out automobiles to the well-to-do foreigners who wanted to enjoy the luxury and status of riding the taxi. In 1914, five Chinese owned taxi companies began renting out taxis in the Chinese section. By 1921, there were 24 Chinese run taxi companies that offered taxis to the rich and powerful political leaders and businessmen in the Chinese zones.¹⁹⁹ By the 1920s, Chinese taxi companies such as The Eastern & Star Garage Company, Auto-Gastle, and Yunfei all had taxi stations where pick-up and delivery services were readily available. Some of the larger taxi companies had close to 100 taxis while the smaller companies had about 20 taxis at their disposal. It's typical for a Chinese merchant to buy an old or used car at discount price, then after remodeling the car, he would purchase a taxi license and began his own taxi business. After accumulating and refurbishing several old or used cars, the family-owned taxi business became more common. A designated lot could be purchased where cars could be parked, and an advertisement could be placed in the newspaper or phone book. The taxi business allowed several Chinese merchant families to become very wealthy during the late 1920s.²⁰⁰

¹⁹⁸ Shanghai Zhinan, 1909 in Shanghai Gonglu Yunshu Weiyuanhui. *Shanghai Gonglu Yunshu Shi*. (History of Shanghai Road and Transportation History), first edition. Shanghai Shehui Kexueyuan Chubanshe, 1988, p.36.

¹⁹⁹ Shanghai Gonglu Yunshu Weiyuanhui. *Shanghai Gonglu Yunshu Shi*. (Shanghai Road and Transportation History), first edition. Shanghai Shehui Kexueyuan Chubanshe, 1988: p.59.

²⁰⁰ Xue, Liyong (editor). *Jiu Shanghai Zhujie Shihua* (Old Shanghai Settlement History). Shanghai Shehui Kexueyuan Chubanshe, 2002, p. 127-131.



Figure 4.10: Chinese owned taxi company (1930)

Several Chinese owned taxi companies sprang up to compete for business. Passengers included government officials and upper class elites.

Source: Xue, Liyong (editor). *Qiu Shanghai Zhujie Shenghuo* (Old Shanghai Concession Lifestyles). Shanghai: Shanghai Shehui Kexueyuan Chubanshe, 2002: p. 130.

Some taxi companies charged different fees according to how many passengers rode in the car. In 1925, a small taxi that could seat two or three people charged 3 Yuan per hour, while a middle sized car that could seat four or five people charged 4 Yuan per hour, and a large mini-van that could seat seven people charged 5 Yuan per hour. In addition to the fares, passengers were required to give the driver a tip, ranging from 40 to 60 cents depending on the distance traveled.²⁰¹ This practice was designed to prevent free riders, as often a group of friends or colleagues would ride the taxi together. In this case, if more people wanted to ride the taxi, the group would be charged a higher fee. This was mutually beneficial to the taxi company as they could charge more money for more passengers, while spending the same amount of time and gas

²⁰¹Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.78.

transporting the riders, and for the riders themselves who could split up and share the total cost of the taxi. Overall, the taxi business only catered to a very small segment of the population, and served more as a symbol of public status for the wealthy rather than a significant transportation tool.

Statistics

An estimate of number of operating motor vehicles in China showed that Shanghai had a disproportionate number of motor vehicles given the city's share of the total population:

Table 4.8

Estimate Number of Motor Vehicles (1933)²⁰²

	Passenger Cars	Motor Buses	Motor Trucks	Motorcycles	Total
Chinese Area	12	107	26	16	161
French Concession	3,849	36	866	117	4,868
International Settlement	6,162	120	1,815	804	8,901
Military Vehicles registered	50		100	50	250
Outside Districts	1,000	65	550	10	1,625
Shanghai Total	11,073	328	3,357	997	15,805
China Total	27,350	5,894	8,259	2,751	44,754
Shanghai % of National Total	40.50%	5.60%	40.70%	36.20%	35.30%

Shanghai contained about 1% of the total population of China, but over 35% of the total motor vehicles and over 40% of all cars and trucks. The main reason was the lack of construction and maintenance of paved roads in other provinces. Approximately 90% of China's road mileage was made of simple earth construction. Very little gravel or macadam construction had been done. The usual method of road construction throughout China (excluding Shanghai's foreign territories) was to cut or fill to the level of the proposed road. When the proper level was

²⁰² *The China Year Book 1933*, p. 319.

reached, the road may be either rolled or left to traffic to be beaten down. The mechanical equipment used was practically non-existent until the introduction of industrial railway dump carts. If the stretch happened to be a cut, the material excavated was shoveled by hand into baskets and carried away to a fill by two coolies, supporting the load on a bamboo pole slung from shoulder to shoulder. The surface was usually leveled by the use of a native-made form of rake having three prongs.²⁰³

Table 4.9

Automobiles and Buses in International Settlement and French Concession (1934)

	International Settlement	French Concession
Public Automobiles	468	N/A
Private Automobiles	5,818	4,015
Total Automobiles	6,286	4,015
Commercial Buses	164	31 ²⁰⁴

In 1934, only some 44,000 motor vehicles were in operation in China, with about one third alone found in the foreign territories of Shanghai. Beside having limited paved roads in other provinces, the tendency of provincial authorities themselves to operate or to grant franchises to private bus line companies for the exclusive use of given roads limited the opportunity for passenger cars. The right to operate motor cars over China's newly constructed roads was still chiefly reserved for government officials or bus line interests. Private citizens have little opportunity and few could afford a private automobile outside of the foreigners living in Shanghai. Increases throughout the 1930s in the numbers of automobiles were primarily

²⁰³ *The China Year Book 1933*, p. 319.

²⁰⁴ *The China Year Book 1934*, p. 601.

confined to that of motor trucks and buses for transportation service rather than for privately owned vehicles.²⁰⁵

The tables below compare the distances and passengers of trams, trolleys, and buses in the International Settlement and French Concession in 1937:

Table 4.10

Trams

Total Distance (km)	International Settlement	French Concession	Total Passengers	International Settlement	French Concession
16,497,433	10,746,511	5,750,922	165,130,931	98,616,120	66,514,511

Total Trams (January 1937)	British	French
290	200	90 ²⁰⁶

Trolleys

Total Distance (km)	International Settlement	French Concession	Total Passengers	International Settlement	French Concession
7,038,641	5,049,392	1,989,249	68,736,210	48,109,486	20,626,724

Total Trolleys (Jan. 1937)	British	French
126	93	33 ²⁰⁷

Buses

Total Distance (km)	International Settlement	French Concession	Total Passengers	International Settlement	French Concession
15,451,027	11,631,826	3,891,201	93,711,744	73,266,682	20,445,062

Total Buses (January 1937)	International Settlement	French Concession
275	230	45 ²⁰⁸

²⁰⁵ *The China Year Book 1934*, p. 600.

²⁰⁶ "Shanghai Yougui Dianche Xinhang Luxian Ji Chenke Renshu". (Shanghai Tram Distances and Passengers). Shanghai Shi Gongyong Ju Tongji She. Shanghai Municipal Archives.

²⁰⁷ "Shanghai Wugui Dianche Xinhang Luxian Ji Chenke Renshu". (Shanghai Trolley Distances and Passengers). Shanghai Shi Gongyong Ju Tongji She. Shanghai Municipal Archives.

²⁰⁸ "Shanghai Gonggong Qiche Xinhang Luxian Ji Chenke Renshu". (Shanghai Bus Distances and Passengers). Shanghai Shi Gongyong Ju Tongji She. Shanghai Municipal Archives.

From the statistics, the trams appeared to be the most common method of motorized public transportation, with slightly more total distances traveled and passenger ridership than the buses. The trolleys covered less area and had fewer routes than trams. The total distances traveled and passengers served for trolleys were less than half the distances and numbers of trams and buses. The larger surface area and earlier installations of each type of motorized vehicles by the British in the International Settlement over the French Concession explained the differences between the two territories.

By 1939, the public utilities available in Shanghai included the tramways, which operated 36 $\frac{1}{4}$ miles of track and 20 $\frac{3}{4}$ miles of trolley bus routes. In 1938, trams and trolleys carried 99,204,164 passengers. The China General Omnibus Company maintained 170 vehicles that ran 5,240,675 miles and carried 57,813,484 passengers in 1936. By the end of 1938, the Shanghai Telephone Company had installed upwards of 63,000 telephones. The Shanghai Gas Company manufactured 806,159,000 cubic feet of gas; the Shanghai Waterworks Company's total output was over 16,154 million galloons, the Shanghai Power Company had a total generating station output of over 594 million kilowatt hours. In addition to trams and buses, there were 9,500 public and 6,500 private rickshaws, 9,500 motor vehicles, 38,000 bicycles, 13,757 licensed handcarts, and 2,826 wheelbarrows in the city.²⁰⁹

As a reflector of socioeconomic status, how does machine-powered public transportation fares compare with man-powered public transportation rates during the 1930s?

²⁰⁹ *The China Year Book 1939*, p. 542.

Table 4.11

Man-Powered Vehicles

Vehicle	Cost	Distance
Wheelbarrow	5-6 cents	500 meters ²¹⁰
Sedan Chair	20 silver dollars	wedding rental ²¹¹
Rickshaw	10 cents	first mile
	40-50 cents	one hour ²¹²
Bicycle	10-30 cents	one hour
	80 cents to 2 Yuan	one day ²¹³

Machine-Powered Vehicles

Vehicle	Cost	Distance
Tram (first class)	3.71-5.02 cents (1940)	first mile
(third class)	2.54-4.43 cents	first mile ²¹⁴
Tram (first class)	6.37-9.11 cents (1941)	first mile
(third class)	4.87-7.29 cents	first mile ²¹⁵
Bus	5 cents	one stop
	20 cents	five stops ²¹⁶

²¹⁰ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p. 10-11.

²¹¹ Tang, Weikang and Du Li. *Hucheng fengsu ji*, p.99 in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999, p.303.

²¹² Shanghai gongyong shiye guanliju, *Shanghai gongyong shiye*, p.250; Fang Fu-an, "Rickshaw in China", 800; Darwent, *Shanghai*, xiv in Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999: p. 71.

²¹³ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p. 90-92.

²¹⁴ "Tramway Fares Increase is Approved by Council". *Shanghai Times*, June 1, 1940.

²¹⁵ "Shanghai Electric Construction Co. Ltd.". *Municipal Gazette*, June 27, 1941.

²¹⁶ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.p.80-81.

In comparing man-powered and machine-powered vehicles' rates and fares, trams and buses costs were similar to wheelbarrow, rickshaw, and bicycle costs. The ability to mass transport many passengers to designated locations along a route allowed trams, trolleys, and buses to be able to provide affordable and accessible travel for commuters. Man-powered vehicles could only transport an individual or at most several individuals. Given the man-power involved and the frequent tips that are often associated, traveling by rickshaw did not necessarily cost cheaper than riding the tram or bus. But the advantage of the rickshaw and bicycle was it could deliver an individual directly to a specific location, rather than a designated stop or station along a route. The convenience of being able to be delivered to your door step was a major reason rickshaws and bicycles were so popular.

The more expensive forms of transport were the taxi and the sedan chair. The taxi and the sedan chair provided an individual or individuals with the privacy of being able to sit inside a vehicle. Comfort and security could be guaranteed without riding alongside the masses of other passengers, as in the tram, trolley, or bus. Arguably the most expensive form of travel involved owning an personal automobile. The high costs of purchase, maintenance, and parking ensured that only the very wealthy could afford a private car.

How does public transportation fares compare to other daily expenses such as food prices?

Table 4.12

Prices of Food in International Settlement Markets (1940)

Food	Unit	Price (Chinese Yuan)
Beef	1 lb.	0.81
Mutton	1 lb.	0.87
Pork	1 lb.	0.72
Veal	1 lb.	1.16
Crabs	1 lb.	0.63
Lobster	1 lb.	2.49
Shrimp	1 lb.	0.67
Bamboo shoots	1 lb.	0.53
Cabbage	1 lb.	0.12
Tomatoes	1 lb.	0.56
Apples	1 lb.	0.29
Bananas	1 lb.	0.22
Oranges	1 lb.	0.38
Pears	1 lb.	0.48 ²¹⁷

It appeared that several round trip rides on the tram or bus was similar in cost to 1 lb. of food. Studies done during the 1930s on the percentage distribution of living expenses based on occupational background revealed how much of a worker's income was spent on food, clothing, rent, transportation, etc.

Table 4.13

Percentage Distribution of Living Expenses in 1931 ²¹⁸

Type of Occupation	Food	Clothing	Rent	Fuel & Light	Miscellaneous	Total
Rickshaw families	73%	6%	8%	11%	3%	100%
Village families	67%	15%	5%	5%	8%	100%
Farm families	58.90%	7.30%	5.30%	12.30%	17.50%	100%

²¹⁷ "Fresh Food Supplies-Prices". Public Health Department Report, January 31, 1941. U1-16-2052, U8528. Shanghai Municipal Archives.

²¹⁸ Lamson, H.D. "People's Livelihood as Revealed by Family Budget Studies", in *Chinese Economic Journal*, May 1931, p. 452.

The China Year Book 1934, p. 267.

			Table 4.13 Continued			
City workers	60.50%	8%	7%	7%	16.20%	100%
Industrial workers	56%	9%	10%	8%	17%	100%
Average	63.10%	9.10%	7.10%	8.40%	12.30%	100%

Another study of standard living among Chinese workers in Shanghai in Hangchow and Shanghai in 1931 examined the budget choices of urban, rural, and farm families.

Table 4.14

Percentage Distribution of Living Expenses among Chinese Workers in 1931 ²¹⁹

Type of Family	Food	Clothing	Rent	Fuel & Light	Miscellaneous	Total
Urban workers	55.70%	8.00%	10.80%	8.80%	16.70%	100%
Rural families	66.80%	18.70%	4.70%	3.60%	6.20%	100%
Farm families	59.00%	8.20%	4.70%	12.30%	15.80%	100%
Average	57.50%	7.50%	7.50%	10.00%	17.50%	100%

Transportation was categorized under fuel & light, and in both studies on average comprised a higher percentage of workers' budget than clothing and rent. Food was the biggest share of the total living expenses. Since food, clothing, and rent are basic necessities, any changes in prices or costs of other living expenses such as public transportation would have a profound impact on people's standard of living. A decrease in the cost of public transportation through more routes, stops, or lower fares would allow commuters to have more savings to spend on other living expenses. An increase in the cost of public transportation such as higher fares would force commuters to cut back on their other living expenses.

²¹⁹ Tao, L.K. "Standard of Living among Chinese Workers". China group, Institute of Pacific Relations, Hangchow and Shanghai, 1931, p. 35-37.
The China Year Book 1934, p. 265-267.

The Impact of Machine-Powered Vehicles on Society

The need to design a modern city that had modern conveniences similar to the cities in the West became the driving force to bring machine-powered motorized vehicles to Shanghai at the turn of the 20th century. Given the increasing number of foreigners residing in the Settlement and Concession, modern public transportation satisfied the accommodations and needs of Westerners living in Shanghai. Each form of motorized vehicle played a specific role and served specific functions in the development of Shanghai's urban infrastructure during the early 20th century. The automobile and the taxi served as personal or private methods of transportation for the wealthy. But as population increased and traffic became a more urgent issue, trams, trolleys, and buses provided the means for mass transit. These forms of mass transport allowed for a large number of passengers to be transported to a designated location on a particular route.

These vehicles did not directly compete with each other for passengers. Trams and trolleys were better served for longer distance travel, as these vehicles traveled at faster speeds than buses but had fewer stops on their routes. They were more efficient in bringing passengers from the suburbs to downtown and vice versa. Buses were more efficient in downtown travel since there were stops every few blocks. More stops on the bus routes allowed passengers to get to downtown areas more effectively.

The wide range of public transportation choices allowed passengers to choose how to travel based on their socioeconomic status and living expenses. Trams symbolized the disparity in social and economic conditions between the rich and poor, foreign and Chinese with the first class and third class distinctions. Buses provided a more egalitarian method of travel. Luxury items such as the personal automobile or the taxi allowed privileged individuals to publicly

display their status. Each form of transportation saw significant increases in passenger ridership as continuous population increases raised demand for each type of vehicle.

While trams, trolleys, and buses became popular, they could not replace rickshaws or bicycles because they could not deliver passengers directly to their door steps. Rickshaws and bicycles remained popular because they were personalized forms of transport where the passenger did not have to share “public space” with the masses. Both man-powered and machine-powered vehicles had different roles and functions to serve, and each vehicle maintained its passenger clientele into the early 20th century.



Figure 4.11: Various types of man-powered and machine-powered vehicles on the road.

Major roads in downtown areas were very congested with heavy volumes of traffic, especially in rush hours.

Source: Wang, Liqun. *Shanghai Shi Lunzi Zhuan Chulai De* (The Wheels of Shanghai). Shanghai: Xuelin Chuban She, 1999.

Chapter 5

State-Society Relations

The relationship between state and society had been complicated given Shanghai's three separate zones of governance. Within this relationship, whose responsibility was it to provide public transportation infrastructure, choices, and accessibility? The authorities in charge, representing the state and the private enterprises, representing companies and entrepreneurs needed to collaborate on this major undertaking. What were the differences in how authorities determined and delegated the construction of public transportation between foreign and Chinese controlled areas? How did these authorities come up with policies for the city's layout? Did private enterprises effectively lobby political authorities for their own financial profit? Were there a working partnership between the state and the private enterprises? This chapter will focus on the public and private relationship where government agenda and private enterprises worked together to build Shanghai's public transportation infrastructure. The two sides depended on each other: the authorities needed to develop an efficient system that could accommodate the growing population and reduce traffic congestion. The private companies needed government authorities to pass laws and regulations that would allow them to profit from society's increasing demands for accessibility and mobility. Much of this working relationship had been based on mutual benefits; and for both sides in all three political jurisdictions, the stakes were enormously high.

In examining the politics behind public transport, this chapter will show that the construction of new roads and placement of major routes or stops had definite political reasons behind them. The determined locations and placements for public transport were designed with specific intentions and motives behind them, which were to allow government authorities to better establish political control. The uneven developments in urban infrastructure caused Shanghai to witness significant differences or gaps in access and mobility. Certain areas of the

city became much more developed than others, which resulted in higher population density and economic prosperity for these designated areas that became more commercially vibrant. Other “less-important” areas of the city lagged behind in infrastructure developments, and could not match the better-developed areas in attracting population growths and commercial activities. Real estate values were directly linked to access to public transport. The uneven developments in public transportation would shift Shanghai’s population density greatly, and reshape the city’s identity in the 20th century.

International Settlement

Construction of more and larger roads was a top priority for the Shanghai Municipal Council as the International Settlement witnessed a significant expansion of the size of its territory and the growing population. In December 1908, the Shanghai Municipal Council officially asked Mr. Johannis de Rijke, an experienced Dutch civil engineer as “Engineer-in-Chief”, where the Council would directly ask him for advice. W.E. Leveson, Secretary of the Shanghai Municipal Council had presented a plan showing suggestions for the construction of a road 75 feet in width along the Whangpoo (Huangpu) river front between Yangtszepoo Creek and the Point, which would greatly facilitate the flow of travel and commerce. The needs for the construction of this major road would be for shipping, since Shanghai depended almost entirely upon shipping trade for its prosperity.²²⁰

In a memorandum written by William Carlson, Harbour Master to H. Elgar Hobson, Commissioner of Customs, Shanghai, Carlson described the increase of shipping in 1908 as being so great that the space within the Harbour Limits had been totally inadequate for its accommodation. He advocated the extension of Harbour Limits to Tung Kou Creek, a stretch of

²²⁰ “Copy for Engineer, December 15, 1908 from W.E. Leveson, Esquire, Secretary, Shanghai Municipal Council to Harbour Master’s Office, Shanghai, 14th December, 1908.” Shanghai Municipal Archives, U1-14-576P-00009.

1.6 miles, which would be suited for the construction of wharves with accommodation for vessels.²²¹ In a letter written from the Harbour Master to Secretary Leveson, Carlson emphasized that “wide public roads should be laid down along the bank of every ride and sea front.” New roads constructed should be 55 feet in width. These wider roads add greatly to the appearance of the city when buildings are being built along the river banks. In the letter, Hobson noted that de Rijke, the Engineer-in-Chief felt that new road construction along the Whangpoo (Huangpu) River should be undertaken by private enterprise, and would be a paying concern.²²²

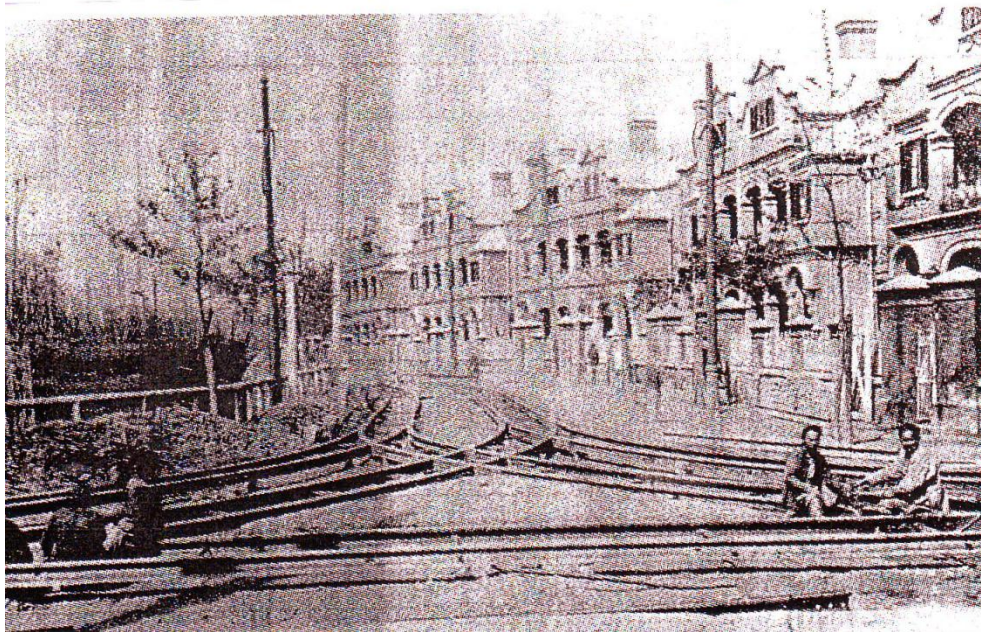


Figure 5.1: Laying the tracks in International Settlement (1907)

Tracks had to be built before trams could arrive.

Source: Xue, Liyong (editor). *Qiu Shanghai Zhujie Shenghuo* (Old Shanghai Concession Lifestyles). Shanghai: Shanghai Shehui Kexueyuan Chubanshe, 2002: p. 121.

²²¹ “Memorandum-Re question of extension of Harbour Limits. William Carlson, Harbour Master to H. Elgar Hobson, Commissioner of Customs, Shanghai. December 15, 1908.” Shanghai Municipal Archives, U1-14-576P-00011.

²²² “Proposed Road Between the Creek and the Point. Letter from the Harbour Master to the Secretary. January 5th, 1909.” Shanghai Municipal Archives, U1-14-576)-00014-00016.



Figure 5.2: Intersection of Nanjing Road and Jiangxi Road in International Settlement (1910)

Nanjing Road would become the busiest shopping area in Shanghai.

Source: Xue, Liyong (editor). *Qiu Shanghai Zhujie Shenghuo* (Old Shanghai Concession Lifestyles). Shanghai: Shanghai Shehui Kexueyuan Chubanshe, 2002: p. 223.

A letter from the engineer and surveyor for road construction plans from 1915 to 1918 was published in the *Shanghai Municipal Gazette* on January 28, 1915. The report indicated there were 44,032 pedestrians, 17,800 rickshas (rickshaws), and 5,714 other traffic in the Eastern and Western Districts of the International Settlement. Fourteen major road construction plans were proposed, and later approved by the Municipal Council upon the recommendation of the engineers who had thoroughly inspected the territories. The proposed plans included the widening of North Fokien Road Extension to 40 feet and its deviation to meet Cunningham Road. The widening of Foochow Road to 50 feet throughout. This road was to be one of the most important Chinese roads in the Settlement and would be the center of the chief places of amusement. The widening of Bubbling Well Road to a width of 50 feet where it has not yet so

scheduled; its extension to Tifeng Road and junction with Great Western Road. The widening of Great Western Road west of Siccawei Road to 60 feet and its further extension, which had been favorably considered by the Council. The widening of Siccawei Road south of Edinburgh Road and extension of the latter northward to Jessfield Village. The construction of a new road from Kiaochow Road to the corner of Singapore Road, northward to Soochow Creek. The widening of Gordon Road to 50 feet and a short extension northward to the Soochow Creek. The widening of Carter Road to 50 feet throughout and Markham Road south of Connaught Road. The widening of North Thiet Road to 60 feet forming a continuation northward of the wide road formed by the culverting of the Defense Creek.

These proposals were not intended to deal completely with the whole question of road extensions and widening, but they deal broadly with the main arteries. The weakest area of development, according to the engineers was the area bounded by Soochow Creek, Carter Road, Bubbling Well Road, and Thibet Road. The widening of Yates Road to 50 feet would be a great improvement to existing traffic but should also involve radical improvements of the area around Bubbling Well Road and Burkill Road junction. The report concluded that in parts of the Eastern and Western Districts where the development of Chinese properties are indicated, the blocks are too big and immediate roads must be scheduled. The schedule for these road constructions should be completed by 1918, according to plans.²²³

Numerous new road constructions led to the establishment of the “Traffic and Licensing Bye-Laws Committee”, which was appointed on March 21, 1916. This committee was organized to set forth traffic laws and regulations throughout the International Settlement. Fines and penalties were set for each type of traffic violations. These included:

²²³ “One Plan: Letter from Engineer & Surveyor”, *Shanghai Municipal Gazette*, January 28, 1915.

“Every person in charge of a vehicle shall keep on the left side of the road and when passing other vehicles, shall do so on the right hand side. “

“Every pedestrian and every person in charge of a vehicle shall obey the signals of the Police engaged in regulating traffic, and must stop at once when required to do so.”

“Every person in charge of slow and heavy traffic and rickshaws shall keep to the sides of the road, leaving the centre for fast traffic.”

“No person in charge of a vehicle shall keep the vehicle standing at the entrance to any building, store, or residence as to block the approach to subsequent arrivals, and impede the passing traffic.”

The penalty cause for any person violating these laws and regulations would be liable upon conviction to a fine of not more than ten dollars for a first offense and twenty dollars for subsequent offenses.²²⁴

To better accommodate the increasing traffic, the Municipal Council decided to significantly widen the roads and extend the lengths. The engineers had recommended to the Municipal Council’s Works Committee that the “irregular lines of roadway scheduled in 1903 prior to the advent of the motorcars are not best suited for present-day traffic requirements.” The engineers advocated for straighter and wider roads in order to avoid bends and curves. On September 17, 1917, construction began on a main road from east to west by joining East Yalu Road to Pingliang Road, widening the roads to 50 feet in width. The new Brennan Road would form a continuous and direct road from the railway station to Jessfield Park, about eight miles in length. This road intersected the densely populated areas in the Northern District and would divert much traffic from the Central District.²²⁵

Since the Municipal Council took annual taxes from residents, or “ratepayers”, the interests of the residents had to be taken into consideration. A letter from Ada French, a resident

²²⁴ “Report of the Traffic and Licensing Bye-Laws Committee-Appointed at the Ratepayers’ Meeting of March 21, 1916.” Shanghai: Printed by Kelly and Walsh, Limited., 1916. Shanghai Municipal Archives: U1-16-184.

²²⁵ “Road Widening and Extension Plans-(Extract).” Copy of Minutes of Works Committee Meeting, September 17, 1917. Shanghai Municipal Archives.

in the Settlement addressed to J.B. Mackinnon, Esquire; a member of the Municipal Council reflected what the residents wanted. In French's letter, she asked on behalf of the residents that the Council build more well-laid roads and improve the conditions of the existing roads. She suggested that the approach to widen and lengthen Broadway, but that the municipal should not grant licenses for the Chinese to set up either shops or houses facing the road. The Chinese landlords could still build one foreign house and perhaps even ten or twenty Chinese places at the rear of the road. She wrote that many in the British Community felt compelled to live in the French Town because their facilities were well laid out. Many people were dubious about living in the Settlement because they felt it was still the "Chinese quarter", and that the British have scarcely any place to allocate to new settlers; many of them were living in alleys in the Hongkew district in semi-foreign houses. She requested a new school was badly needed in the area from Muirhead Road on one side and Yangtszepoo Road on the other side to as far as Tongshan Road and Lay Road. This would make the area a more attractive model settlement.²²⁶

The Municipal Council held meetings that specifically addressed residents' concerns. During the meeting on August 11, 1916, the Council met with the engineer and surveyor and agreed to "readily give its support for such a project but that the initiative must come from the whole of the landowners concerned."²²⁷ In a return letter from the Acting Secretary to Mrs. French, the Council acknowledged the receipt of her letter on the subject of town planning in the Eastern district. However, the Council stated that "it had no powers as to stipulate the style of buildings which shall be erected on any specified locality". Support would be given to any reasonable and justified project residents proposed, "but it would require the sanction of all the

²²⁶ "Letter from Ada French to J.B. Mackinnon, Esq." August 7, 1916. Shanghai Municipal Archives.

²²⁷ "Town Planning-Eastern District." August 11, 1916. Shanghai Municipal Archives.

landowners concerned.”²²⁸ The Municipal Council was willing to take any resident’s requests and suggestions into consideration, but would only approve any projects or initiatives if all, or at least the vast majority of residents were going to be satisfied.

In an earlier report on September 4, 1917, a comparison of the roads in the French Concession was made to advocate the increase widening of roads. A reference was noted that in the French Extension area, it had been proposed to have no roads under a width of 20 meters. The French had viewed wide roads as essential for the development of a foreign residential area. The Works Committee noted that the International Section had numerous sections densely populated with Chinese, and wide trunk roads through these areas to the outlying districts are essential for commuters. While some engineers had recommended widening the roads even more, the Council decided that 40 feet was sufficient width around Avenue Edward VII, Yangtszepoo, Pingliang, North Szechuan, Nanking, and Gordon Roads. Other roads away from these densely populated areas would be widened even more.

Muirhead Road was widened to 60 feet and Chaoufoong Road was widened to 50 feet to form direct and much needed access between the Wayside District and the neighborhood of Rifle Range and Hongkew (Hongkou) Recreation Ground. East Seward, Seward, and Tiendong Roads were widened to 60 feet to form a main thoroughfare from Wayside District to North Szechuan and North Honan Roads. Seward Road had been very congested due to its convergence with Broadway, where widening would relieve the congestion on the northern approach of the Garden Bridge. Honan and North Honan roads were widened to 50 feet since Honan Road formed a good alternative road from the Central District northward, and because it had been the direct route from the old North Gate of the city to the Shanghai Railway Station. A census taken in

²²⁸ “Letter from Acting Secretary to Mrs. French.” August 18, 1916. Shanghai Municipal Archives.

January 1915 had showed Honan Road had carried the most traffic, thus increasing the width of the road would alleviate and accommodate more traffic flow.²²⁹

In the engineers' report to the Works Committee, they laid out the reasons for widening and extending certain main arteries of the Settlement. The engineers felt the traffic congestion had been due to the lack of foresight on the part of the early residents decades ago, who did not consider the need to built roads wider than the passing of two wheelbarrows. Because of inadequate width of minor roads, residents in outlying districts had to pass through the heart of the Central District, thus swelling an already congested volume of traffic in the business quarter. The Works Committee proposed to increase the width and length of roads between the Western District and the Hongkew Recreation Ground to provide better direct communication, and to make it feasible for travelers to move from Jessfield to the Point (railway station) without using the heavily congested Nanking (Nanjing) and Szechuan Roads. In some cases, a minor connexion of existing roads were considered to be suffice, while other roads required more extensive widening and extensions.²³⁰

Beside engineers, residents continued to express the desire to increase the size of the roads for better accessibility and mobility. In a letter from J.J. Symmington and others to N.O. Liddell, the acting secretary of the Shanghai Municipal Council dated on February 15, 1918, Symmington wrote "the ratepayers and residents in the Eastern District request laying a road giving direct communication between the Yangtszepoo District and the areas around the Public School for Boys and Hongkew Recreation Ground." The letter noted that at present, a boy attending the Public School has to travel by tram right up to the Garden Bridge junction, then

²²⁹ "Extract from report dated June 7, 1917." Copy of Minutes of Works Committee Meeting, September 4, 1917. Shanghai Municipal Archives.

²³⁰ "Official Plans of Road Extensions and Widening." Copy of Minutes of Works Committee Meeting, December 3, 1917. Shanghai Municipal Archives.

change cars and journey along North Soochow Road, North Szechuan Road, and North Szechuan Extension. This is a very long and dangerous journey, with great loss of time and fatigue to children. Symmington expressed that he and other residents are greatly concerned about the dangers to which young boys are exposed to when changing cars, especially at the general rush hour for cars around the Astor House corner. The alternative, which will allow boys to commute to school safer and quicker involve considerable extra expenses. This is why the letter asked for a new and wider road directly connecting the Yangtszepoo District and the Northern District.²³¹

In a return letter to Symmington dated March 8, 1918, Liddell wrote that after considering the request, the Council fully realized the need for direct communication between Yangtszepoo and the neighborhood around the Public School for Boys. Instructions have been given by the Council to the engineers for steps taken to improve the means of transportation between the Eastern and Northern Districts.²³²

After the road construction was approved, the engineers and surveyors wrote back to the Council secretary with their proposed road connecting Yangtszepoo District with the Public School for Boys and Hongkew Recreation Ground. The engineers submitted a plan dated on April 13, 1918, proposing a possible connection of the Muirhead Road with Urga Road. That section to the west of Kungping Road was comparatively clear of houses and can be easily acquired. The engineer-in-chief suggested the acquisition of this section of the road immediately. The portion to the east of Kungping Road presented more difficulties, and would be necessary to remove several foreign houses and acquire lot 1139. A direct continuation of the Muirhead Road is not possible as access is not obtainable through the Wah Hai Miao (temple) property. The

²³¹ "Letter from J.J. Symmington and others to N.O. Liddell, The Acting Secretary, Shanghai Municipal Council." February 15, 1918. Shanghai Municipal Archives.

²³² "Letter from N.O.Liddell to J.J.Symmington." March 8, 1918. Shanghai Municipal Archives.

recommendation was that the section east of Kungping Road be scheduled in the ordinary way and the land acquired when the opportunity became available.

With regard to the more direct access to the Public School for Boys through an extension of Chaoufoong or Kungping Road, three options were suggested. First option was to cooperate with the Chinese authorities. This would mean that the road would be constructed over the course of the next few months, but the control would pass over to the Chinese whereas the cost of acquisition, construction and maintenance would be covered primarily by the Municipal Council. Second, purchase a series of holdings adjacent to each other and with these acquisitions cutting out the necessary road area. This involved purchasing considerable surplus land but there would be no difficulty in disposing of such land, once the land is constructed. This method through land purchases would raise land values. The drawback in this scheme would be a leakage of information which may result in the Council having to pay exorbitant fees for the final connecting links. The third option would be to arrange a company such as the Shanghai Land Inmant Company, Ltd., to purchase an estate on the proposed road. It would be understood that the Council would allow the company to develop the land and that one half of the purchase price of the road be funded by the private company. This action would fund the Dixwell Road Extension. The third choice was the most promising with the engineers suggesting road extensions should be 50' inches in width and this width should apply to all sections within the settlement boundary.²³³

After reviewing the engineers' recommendation, the Works Committee approved the connexion of the Unga and Muirhead Roads and the extension of the Kungping Road.²³⁴ On

²³³ "Proposed Road Connecting Yangtsepoo District with the Public School for Boys, Hongkew Recreation Ground, etc.". in Letter from Engineer & Surveyor to Secretary. April 13, 1918. Shanghai Municipal Archives.

²³⁴ "Connexion, Eastern and Northern Districts." Copy of Minute of Works Committee Meeting, April 29, 1918. Shanghai Municipal Archives.

March 4, 1919, a petition was submitted by 39 residents of the Eastern District requesting the provision of better road access between Wayside and the Public School. The engineer-in-chief advocated in his report for the construction of trunk thoroughfares, but that this extension proposed had great practical difficulty since it involved traversing a triangular shaped-area, which was located not only outside the boundaries of the Settlement, but was not included even in the extension area. It was suggested that a practicable route would be to deviate Muirhead Road to meet Urga Road, and this course was approved by the Works Committee on March 4, 1919.²³⁵ After inspecting the site, the engineer-in-chief affirmed that the project could be completed at a cost of 16,700 taels (1 Chinese Yuan= 0.72 taels)²³⁶ with additional charge for lighting.

On August 16, 1920, the members of the Works Committee endorsed road planning of the whole Settlement area with the scheduling of roads through unregistered land. The Commissioner of Public Works, appointed by the Municipal Council would assume the leadership of all urban infrastructure development projects starting in 1921.²³⁷ C.H. Godfrey was appointed as the Commissioner of Public Works. In his first letter to the Secretary of the Municipal Council, he detailed his vision for future road planning developments. The central question addressed was the direct connection between road planning and traffic congestion, both vehicular and pedestrian. When the intersecting roads are a considerable distance apart, such as when the blocks of house property are large, the roads served a larger number of people than would be the case if the blocks were smaller. Godfrey noted that in other public works, the greater the road area compared to the property area, the less congestion on the roads. He

²³⁵ "Muirhead and Chaoufoong Roads." Copy of Minute of Works Committee Meeting, March 4, 1919. Shanghai Municipal Archives.

²³⁶ "The Global History of Currencies-China". Global Financial Data.

²³⁷ "Road Planning." Copy of Minute of Works Committee, August 16, 1920. Shanghai Municipal Archives.

continued by comparing other large urban cities by pointing out most large cities have regulations governing the distance between intersecting streets, and despite the density of the population in Shanghai, most of the blocks of property were very much larger here than would be allowed elsewhere.

In comparison, in Leeds the maximum distance allowed between intersecting streets was 150 yards, and in Liverpool the regulation was the same, except that in the case of blocks of property in one occupation, a distance of 400 yards was permitted. In Shanghai, the block of property bounded by the Bund, Hankow, Szechuen, and Foochow Roads was 150 yards square. Godfrey showed that in reference to the plan of the Settlement that while the blocks were not excessively large in the Central District; this was not the case in other districts, particularly the Western and Eastern. The cost of cutting up blocks of existing house property with additional intersecting roads would be enormous, but something could be done in the case of undeveloped or partially developed districts. The difficulties would be of course, the strong opposition from land owners and others with vested interests, as it would cut up so many properties, and the costs would be an important factor. The report concluded that while the road planning was tentative, it was considered to have advantages.²³⁸

A report from Charles Reade, government town planner and J.M. McKee, his assistant secretary, based on their observations and inspections to the Municipal Council on August 7, 1922 outlined the challenges and feasibility of road widening plans. The report informed the Council that 1) the width of the road represents the width between buildings. As a general rule, buildings can be erected to a height equal to one and a half times the width of the land. Owners desiring to build to a greater height than allowed by the rules would be compelled to set back the

²³⁸ "Road Planning". Letter from C.H. Godfrey, Commissioner of Public Works to the Secretary. Works Committee Minute, September 22, 1920. Shanghai Municipal Archives.

upper stories. 2) Owners do not anticipate widening. All road widening and extensions are definitely laid down on plans issued annually, and all new buildings are to be erected to these lines. 3) Payments are to be made for the land, when available for public use, and when the necessary formal surrenders had been executed. 4) For purposes of taxation and acquisition of land, the registered property within the Settlement would be assessed every five years, though this period had occasionally been reduced, owing to fluctuations in land values.

The annual road widening planned reflected all of the Council's approved proposals and requirements for the current year. When these plans were officially approved by the Council, a notice appeared in the Municipal Gazette stating that the plans would be open for inspection and that land owners have the right for three months after publication of such notice to protest in writing against any road extension or widening or scheduling for public purposes. Such protests would be considered by the Council, and if considered advisable, alterations would be made in the official plans. No hard and fast rules could be laid down as to the amount of compensation payable to land owners, with each case being considered on its individual merits. But it was customary in the case of land required for roads to base compensation upon the assessed value of the property less a deduction (varying from one-fifth to two-thirds) for betterment with a final addition of 10% for compulsory surrender. Occasionally, if the land scheduled for acquisition had been without road access, a free surrender of the necessary road land would be demanded. Under Land Regulation 6a., land which becomes registered after a road was scheduled would be subject to compulsory free surrender.

With regard to land which had been used for public purposes such as parks, markets, etc., the price paid would usually be higher than the assessed value, and in these cases the compensation would be a matter of arbitration or compromise. A case of land acquisition was

only referred to the Land Commission when it was found impossible for the Council and the land owners to agree. In the outlying districts, Chinese or unregistered land, as opposed to registered land, it would usually be acquired at the “Proclamation Rate”, which was approximately the value of land for agricultural purposes and had been settled between the Council and the Chinese authorities concerned. On the other hand, Chinese land which was situated in the more developed portion of the Settlement would be accorded the same treatment as land in the possession of foreign owners, provided that the owners would undertake to affect Consular registration or to pay land tax on an assessed value of the remaining portion of the property.²³⁹

On April 17, 1923, the Municipal Council released a report of the new road constructions, widening and extensions that had taken place in the International Settlement:

Table 5.1

District	Open to Traffic (Miles)	Not Open to Traffic (Miles)	Total Miles
Central	7.3	None	7.3
Northern	5	0.4	5.4
Eastern	15.4	5	20.4
Western	12.4	0.8	13.2
Total	40.1	6.2	46.3

Of the 40 miles now open to traffic, 30 miles were approximately still incomplete and negotiations would be necessary to widen for this length. The Eastern and Western districts saw significant new road constructions that increased access for passengers into previously unpaved or unsettled territories.

Table 5.2

Trunk Roads	60 feet wide or over Miles	Under 60 feet wide Miles	Total Miles
Outside Settlement	8.5	18.5	27

²³⁹ “Letter from Charles H. Reade, Government Town Planner and J.M. McKee, Assistant Secretary to Shanghai Municipal Council.” August 7, 1922. Shanghai Municipal Archives.

New roads were to be over 60 feet wide in order to allow more vehicles and pedestrians to pass through, as well as to allow for vehicles to park on the edges of the streets. Included in the 8.5 miles for roads that are 60 feet wide or over were sections of approximately four miles in length for which negotiations were necessary or ongoing to complete to full width. The total length of roads within the Settlement Boundary was now 158 miles long. The total area of the Settlement was 33,503 mow. Of this area, paved roads comprised 5,750 mow, or 17.2% of the total. Deducting the paved roads, it left 27,753 mow of available land in the Settlement for development or other purposes, with the ratio of 4.3 mow to every one mow of roads.²⁴⁰

²⁴⁰ "Trunk Roads 60 feet or over." April 17, 1923. Shanghai Municipal Archives.

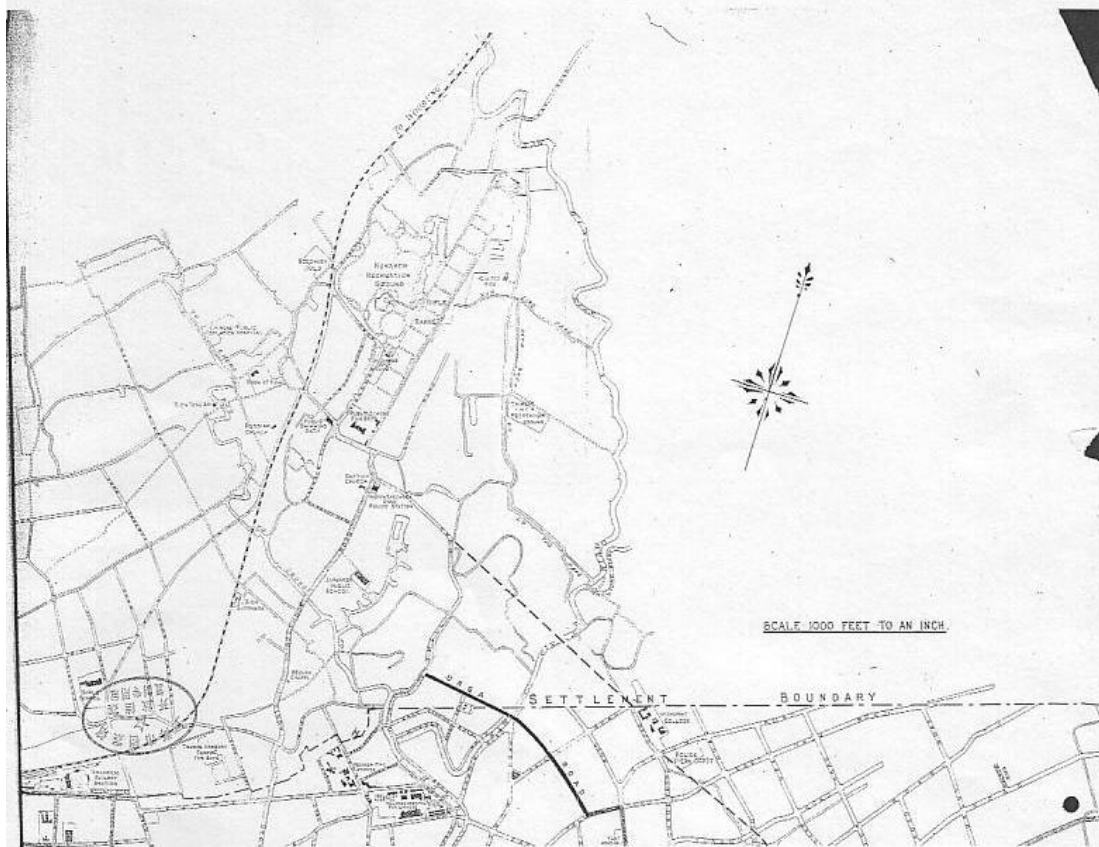


Figure 5.3: Hongkew (Hongkou) district in International Settlement

Scale: 1 inch=1,000 feet

Hongkou, on the north side of the International Settlement was considered a very desirable residential neighborhood.

Source: Shanghai Municipal Archives.



Figure 5.4: International Settlement Boundary

Scale: 1 inch= 1,000 feet

The International Settlement continued to expand, bordering the Huangpu River.

Source: Shanghai Municipal Archives.

In the report, the Council released a detailed mileage of main roads in each district with the schedule width and length of roads that were expected to be completed by the end of 1923.

Table 5.3

Mileage of Main Roads in Central District

Road	Section	Scheduled Width	Length
The Bund	Avenue Edward VII & Garden Bridge		0.7
Szechuen	Avenue Edward VII & Soochow Bridge	70'	0.8
Honan	Avenue Edward VII & Soochow Road	60'	0.8
Fokien	Avenue Edward VII & Soochow Road	60'	0.7
Thibet	Avenue Edward VII & Sinza Road	80'	0.8
Avenue Edward VII	The Bund & Thibet Road	110'	0.9

Table 5.3 Continued			
Soochow	The Bund & Thibet Road	70'	0.9
Nanking	The Bund & Thibet Road	60'	0.9
Peking	The Bund & Thibet Road	70'	1.0 ²⁴¹

Mileage of Main Roads in Northern District

Road	Section	Scheduled Width	Length
North Thibet	North Soochow & Settlement Boundary	80'	0.3
North Chekiang	North Soochow & Settlement Boundary	60'	0.5
North Fokien	North Soochow & Boone Road	60'	0.4
Cunningham	Boone Road & Settlement Boundary	60'	0.3
North Honan	North Soochow & Settlement Boundary	60'	0.6
North Szechuen	North Soochow & Settlement Boundary	60'	0.5
Seward	Broadway & Fearon Road	60'	0.3
Broadway	Garden Bridge & Fearon Road	75'	0.4
Alabaster	Settlement Boundary & North Chekiang	60'	0.3
Tongdongkaloong	North Chekiang & North Kiangse	60'	0.3
Tiendong	North Kiangse & Broadway	60'	0.5
Haining	Settlement Boundary & Chapoo Road	60'	1.6
Yalu	Chapoo Road & Fearon Road	60'	0.4 ²⁴²

Mileage of Main Roads in Eastern District

Road	Section	Scheduled Width	Length
Broadway East	Dixwell Road & Muirhead Road	75'	0.9
East Seward	Dixwell Road & Muirhead Road	60'	0.9
East Yalu	Dixwell Road & Tongshan Road	60'	0.5
Ward	Muirhead Road & Linching Road	70'	1.8
Pingliang	Yangtszepoo & Liping Road	70'	3.1
Yangtszepoo	Muirhead Road & Liping Road	75'	3.6
Point	East Seward & Linching Road	80'	3
Point	Linching Road & Normal Line	120'	1.4

²⁴¹ "Mileage of Main Roads in Central District." April 17, 1923. Shanghai Municipal Archives.

²⁴² "Mileage of Main Roads in Northern District." April 17, 1923. Shanghai Municipal Archives.

	Table 5.3 Continued		
Muirhead	Yangtszepoo & Settlement Boundary	60'	0.9
Dalny	Yangtszepoo & Settlement Boundary	60'	0.9
Lay	Yangtszepoo & Ward Road	60'	1
Sansing	Yangtszepoo & Ward Road	60'	0.8
Glen	Yangtszepoo & Point Road	60'	0.5
Kueiyang	Yangtszepoo & Hochien Road	60'	0.5
Liping	Yangtszepoo & Settlement Boundary	140'	0.4 ²⁴³

Mileage of Main Roads in Western District

Road	Section	Scheduled Width	Length
Avenue Foch	Chungking Road & Avenue Haig	70'	1.4
Manila	Changtu Road & Avenue Edward VII	90'	0.3
Avenue Edward VII	Manila Road & Thibet Road	90'	0.4
Avenue Haig	Avenue Foch & Bubbling Well	60'	0.1
Jessfield	Bubbling Well & Settlement Boundary	60'	0.1
Kiaochow	Avenue Road & Yuyuen Road	60'	0.1
Gordon	Bubbling Well & West Soochow	70'	1.8
Yates	Bubbling Well & Avenue Foch	60'	0.5
Chengtutu	Avenue Foch & West Soochow	60'	1.2
Mohawk	Bubbling Well & Avenue Edward VII	60'	0.4
Robison	West Soochow & Settlement Boundary	60'	0.8
Sinza	Thibet Road & Settlement Boundary	60'	2.1
Bubbling Well	Thibet Road & Settlement Boundary	70'	2.1
Great Western	Avenue Haig & Settlement Boundary	60'	0.03
Avenue	Thibet Road & Jessfield Road	70'	2.0 ²⁴⁴

The road constructions focused on widening and extensions during the 1910s and 1920s paid off in significant renovations and upgrades in each of the districts within the Settlement. By the early 1920s, the Settlement had become very accessible for an increasingly mobile urban population and a wide range of man-powered and machine-powered vehicles.

²⁴³ "Mileage of Main Roads in Eastern District." April 17, 1923. Shanghai Municipal Archives.

²⁴⁴ "Mileage of Main Roads in Western District." April 17, 1923. Shanghai Municipal Archives.

On January 17, 1928, Charles Harpur, the Commissioner of Public Works wrote to Captain E.I.M. Barrett, the Commissioner of Police with a table of the mileage of roads and public alleyways and the distance in miles of roads and public alleyways patrolled by the police.

Table 5.4

	Roads	Public Alleyways
Western District		
Inside Settlement	45	15
Outside Settlement	13	
Central District	21	6
Northern District		
Inside Settlement	22	12
Outside Settlement	3	
Eastern District A	36	7
Eastern District B	9	
Total	149	40

Table 5.5

Distance in Miles of Roads and Public Alleyways Patrolled by the Police

	Roads	Public Alleyways
Western District		
Inside Settlement	45	15
Outside Settlement	13	
Central District	21	6
Northern District		
Inside Settlement	22	12
Outside Settlement	3	
Eastern District A	36	9
Eastern District B	9	
Total	149	42 ²⁴⁵

²⁴⁵ "Letter from C. Harpur, Commissioner of Public Works to Captain E.I.M. Barrett, Commissioner of Police." January 17, 1928. Shanghai Municipal Archives.

The construction in the Settlement caught the attention of the American Consul General in Shanghai. Edwin Cunningham, the American Consul General was very impressed with how the Municipal Council managed to revamp the urban layout and wanted to ask Stirling Fessenden, the Chairman of the Shanghai Municipal Council for advice in this letter dated January 15, 1929:

“Sir: I have the honour to inquire if it is possible for this Consulate General to obtain from the Municipal Council information regarding the total number of miles of roads, suitable for motor traffic, in operation, under construction, and projected in the International Settlement; and a list classified by types of their construction, viz: Macadam, concrete, asphalt, dirt, and cinder, etc. It is needless to state that any information received will be much appreciated.

I have the honor to be, Sir,
Your obedient servant,
Edwin S. Cunningham
American Consul General ²⁴⁶

The Commissioner of Public Works replied back to the American Consul General with a table of the description of roads:

Table 5.6

Present Mileage of Roads (January 23, 1929)

Districts

Description	Central	Northern	Eastern	Western	Total Miles
Waterbound	2,723	7,349	20,465	33,743	64,280
Macadam					
Bituminous	12,596	10,836	7,004	12,740	43,536
Concrete					
Sett Paved	5,232	6,435	3,110	1,500	16,278
Wood Block	0.945				0.945
Unmetalled		0.484	17.643	30.404	48.531
Total	21.856	25.105	48.222	78.387	173.57

²⁴⁶ “Subject: Roads-Types and Mileage. Letter from American Consular Service, Edwin S. Cunningham: American Consulate General to Stirling Fessenden: Chairman, Shanghai Municipal Council.” January 15, 1929. Shanghai Municipal Archives.

Waterbound macadam, bituminous concrete, sett paved, and wood block are suitable for motor traffic in all weathers but unmetalled would only be suitable in fine weather. The program for road construction in 1929 had not been approved but it may be assumed that about three miles of the unmetalled roads would be converted into waterbound macadam roads.²⁴⁷

Harpur also provided a description and mileage of roads within the Settlement that was under Municipal Council's control:

Table 5.7

Districts

Description	Central	Northern	Eastern	Western	Total Miles
Waterbound	2,755	5,066	21,736	19,695	40,252
Macadam					
Bituminous	12,999	8,968	7,634	10,750	40,351
Concrete					
Sett Paved	5,157	6,333	3,045	1,500	16,035
Wood Block	0.945				0.945
Unmetalled		0.23	16.833	3.681	20.744
Total	21.856	20,597	49,248	35,626	127,327

The length of alleyways was 54.22 miles, situated as follows:

Central District: 2.44 miles
 Northern District: 3.36 miles
 Eastern District: 25.22 miles
 Western District: 23.20 miles
 Total: 54.22 miles

The length of drains and sewers are:

Storm and surface water drains
 Inside Settlement: 101 miles
 Outside: 8.2 miles
 Total: 109.2 miles

²⁴⁷ "Roads-Types and Mileage." Letter from C. Harpur, Commissioner of Public Works to American Consul General. January 23, 1929. Shanghai Municipal Archives.

Sanitary sewers

Inside Settlement: 37.6 miles

Outside: 7.4 miles

Total: 44.8 miles

Total mileage of paved roads

Inside Settlement: 127,327 miles

Outside: 47, 545 miles

Total: 174, 870 miles²⁴⁸

The years from 1929-1933 saw the significant road expansions and renovations under the leadership of Charles Harpur as Commissioner of Public Works. Both large roads and private alleyways were widened, expanded, and upgraded.

Table 5.8

Mileage of Private Alleyways in the Settlement (February 6, 1930)

Settlement	Mileage
Eastern District:	57.6 miles
Northern District:	51.7 miles
Central District:	34.7 miles
Western District:	57.4 miles
Total	201.4 miles ²⁴⁹

Harpur had ambitious plans for expanding roads and mileage. His projected goals for 1930 was detailed in his follow-up letter to the American Consul General dated on May 2, 1930.

²⁴⁸ "Description and Mileage of Roads." Letter from C. Harpur, Commissioner of Public Works to American Consul General. January 23, 1929. Shanghai Municipal Archives.

²⁴⁹ "Mileage of Private Alleyways in the Settlement." Shanghai Municipal Council Report. February 6, 1930. Shanghai Municipal Archives.

Table 5.9

Mileage of Roads as of December 31, 1929

Districts

Description	Central	Northern	Eastern	Western	Outside Limits	Total Miles
Total Completed	21,856	20,597	49,248	35,626	47,513	174,840
Projected (1930)	0.417	1,060	11,435	10,159		23,071
						197,911 ²⁵⁰
Total by end of 1930	22,273	21,657	60,683	45,786	47,513	

Harpur insisted that all new roads must be built with waterbound macadam, bituminous concrete, sett paved, or wood block. These four types would be suited for motor vehicles in all types of climate. No new roads would be constructed using unmetalled surface, as this type would only be suitable in fine weather. The Public Works Commission focused their tasks on increasing road expansions in the less developed and less densely populated Eastern and Western districts in order to accommodate more residents who are moving away from the crowded Central and Northern districts in search of more affordable housing.

In actuality, the mileage of completed roads at the end of 1930 fell short of Harpur's goals. His lofty ambitions may have been too much for the engineers working on the project.

²⁵⁰ "Mileage of Roads at 31 December 1929." Letter from C. Harpur, Commissioner of Public Works to American Consul General. May 2, 1930. Shanghai Municipal Archives.

Table 5.10

Mileage of Roads as at December 31, 1930

Description	Central	Northern	Eastern	Western	Outside Limits	Total Miles
Total	21,929	20,597	50,022	35,903	47,513	175,964 ²⁵¹

In 1930, a total of 8.49 new miles were added to the Settlement under the terms of Extension Agreement of 1899. Of the new mileage of roads, 4.34 miles were constructed by the Council, which remained outside of the Settlement limits. The mileage of external roads between the Western Boundary of the Settlement and the Railway Line was now 20.4 miles.²⁵²

Harpur was not detoured by the failure to reach his targeted goals for road construction in 1930. For 1931, he set even higher expectations for increasing the mileage of roads in further urban expansions. In his report to the American Consul General, he submitted his projected goals for 1931:

Table 5.11

Mileage of Roads as of December 31, 1930

Districts

Description	Central	Northern	Eastern	Western	Outside Limits	Total Miles
Total Completed	21,929	21,657	50,022	35,903	47,513	175,964
Projected (1931)	0.417	1,060	11,435	10,159		23,071
Total by end of 1931	22,346	21,657	61,457	46,062	47,513	199,035 ²⁵³

²⁵¹ "Mileage of Roads at 31 December 1930." Shanghai Municipal Council Report. May 15, 1931. Shanghai Municipal Archives.

²⁵² "Mileage of Roads at 31 December 1930." Shanghai Municipal Council Report. May 15, 1931. Shanghai Municipal Archives.

²⁵³ "Mileage of Roads at 31 December 1930." Letter from C. Harpur, Commissioner of Public Works to American Consul General. June 10, 1931. Shanghai Municipal Archives.

Harpur had set the same projected target for 1931 as he had for 1930. By the end of 1933, while the mileage of roads had increased significantly over 1928, it nevertheless fell far short of Harpur's expectations.

Table 5.12

Mileage of Roads as of December 31, 1933

Districts

Description	Central	Northern	Eastern	Western	Outside Limits	Total Miles
Total	22,058	25,311	53,445	81,195	47,513	229,522 ²⁵⁴

Harpur may have set unrealistic targets but under his leadership, the Public Works department focused on constructing and paving new roads inside territories within the Settlement's boundary, or under the Municipal Council's direct control. There were no constructions in the outside limits of the Settlement. Growth and expansion in the International Settlement had resulted in significantly more miles of paved roads than the French Concession. In a letter from the International Labour Office's China Branch to Charles Harpur dated July 17, 1934; a comparison between mileage and roads in the International Settlement and French Concession revealed the widening gap:

²⁵⁴ "Description and Mileage of Roads at December 31, 1933." Shanghai Municipal Council Report. July 7, 1934. Shanghai Municipal Archives.

Table 5.13

Mileage- Roads (Open to Traffic)

District	Miles
Central	22.05
Northern	22
Eastern	53.44
Western	38.52
Total Inside Settlement	136.01

Outside Limits: Northern	3.8
Outside Limits: Western	20.4
Total Outside Limits	24.21

French Concession	59 ²⁵⁵
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The mileage of roads in the territories within the Settlement boundaries was more than twice as large as the mileage in the French Concession. Much of the expansion growths could be attributed to the higher population density in the Central District that propelled the Municipal Council to construct new roads to reduce traffic congestion and find new residential areas. The Public Works Commission and the engineers worked to accommodate residents' needs, and devised annual construction and expansion plans.

Charles Harpur wrote back to the International Labour Office, China Branch on September 28, 1934 with the statistics of public alleyways they had inquired earlier:

²⁵⁵ "Letter from International Labour Office China Branch to C. Harpur." July 17, 1934. Shanghai Municipal Archives.

Table 5.14
Public Alleyways

District	Miles
Central	3
Northern	4.75
Eastern	36.45
Western	24.6
Total	68.8 ²⁵⁶

Just like the road construction plans, most of the expansions in the alleyways were in the Eastern and Western districts, which were home to more and more residents during the late 1920s to early 1930s.

Despite numerous accomplishments, there were still plenty of problems for Shanghai's roads. An article written in the *Shanghai Times* by S.H. Peek, a member of the Rotary Club highlighted the challenges that traffic strangulation had on a city of continuously growing population. Peek noted that despite road widening, the fundamental trouble with the roads was that they were still too narrow for the volume of traffic they are called upon to bear. He asked if this was the case today, how would the roads handle more population density, more number of motor cars, and the demands of motorists, rickshaws, hand-drawn trucks, wheelbarrows, bicycles, and pedestrians in rush hour traffic every day in the years to come?

Peek suggested that in the extremely densely populated Central and Northern districts, once a road widening had been scheduled, the Council should not grant any building permit for reconstruction on the scheduled area- any new building erected on the lot will have to be set back to the new building line. A major traffic congestion point prone to accidents had been at Peking Road, which had been increased in width to 70 feet since 1921 but when it joined the Bund, it

²⁵⁶ "Letter from C. Harpur: Commissioner of Public Works to The International Labour Office, China Branch." September 28, 1934. Shanghai Municipal Archives.

was only 40 feet wide at the intersection- quite a nasty bottleneck for the heavy traffic of vehicles and pedestrians. Charles Harpur had released figures regarding the expenditure the Public Works department had incurred during the years from 1926 to 1933 a sum of more than 14 million dollars for the 936 areas where road construction and renovation had taken place. The amount claimed as compensation by the owners who were called upon to surrender land totaled nearly 21 million dollars. The total road frontage affected was 162,428 feet. These figures showed how much more rapid progress was made during the “boom” years when many new buildings were erected. In 1931, the expenditure was nearly 3 million, but in 1933, it dropped to \$1,264,000. The question of financing any serious scheme to expediting the road widening programs had become more difficult.

The cost of road widening increased with the rise in land values, a correspondingly greater amount would be required each year to merely maintain the present rate of development. In 1920, most of the eastern district was undeveloped farm land, and only isolated lots were even registered. These stood at around 500 taels per mow. In 1927, the figure had gone up to 3,000 taels, and in 1934, it has reached 7,000 taels. The average price paid for the area acquired for the following year could be as high as 8,200 taels per mow. After a road widening plan had been approved, the Council must pay the land owner for heavy compensation. Not only must the land be paid for, but also the building, plus loss of rent, and disturbance of trade. Since it would be difficult and expensive to maintain the previous pace of road widening, Peek believed a solution would be to have more policemen at the site of congested alleyways to reduce traffic accidents.²⁵⁷

²⁵⁷ “Shanghai Road Troubles As Discussed Before Rotary.” *Shanghai Times*, November 23, 1934.

An editorial appeared in *Shanghai Times* the next day that insisted many people felt there really was no acute traffic problem in Shanghai. They point to the absence of any serious traffic blocks such as occur in London or other large cities, to the fact that it was possible for residents to get from their homes to their offices in 20-25 minutes even if they lived in the more outlying residential areas away from the city center. The more efficient traffic control by the police had prevented many accidents during rush hour times. However, the editorial did support Peek's perspective of the need to create a cleaner city with wider arterial thoroughfares, a planned provision for the future, the creation of adequate pavement room on which pedestrians could walk in safety and comfort, and the uncluttering of roads in the downtown business district by the removal of hundreds of parked cars which could seriously obstruct the flow of traffic.²⁵⁸

Another editorial appeared in the *North China Daily News* that same day that addressed the financial challenges of continued road widening. The article described Peking Road having already made significant progress in widening that had now given to more freedom in the flow of traffic. However, the difficulty in adopting an intensive program of road widening was chiefly tied to expenses. This would not arise solely from the cost of compulsory acquisition. There were indirect costs such as the economic loss on the community as a result of relocation and pushing back construction of new houses for residents affected. Furthermore, looking at the present (1934) state of trade and worldwide economic depression, such an increase in taxes would be considered excessively burdensome for both foreigners and Chinese residents alike. The editorial concluded that the traffic problem cannot be discussed entirely in terms of the inconveniences caused to less than 15,000 car owners in Shanghai. The city will have to do the best it can to deal with the roads and traffic given the resources available.²⁵⁹

²⁵⁸ "Shanghai Roads." *Shanghai Times*. November 24, 1934.

²⁵⁹ "Traffic Plans." *North China Daily News*, November 24, 1934.

Charles Harpur had been very conscientious of the comparisons between the International Settlement and French Concession. In a letter he wrote to his colleague E.B. Howell, Esquire., in England, Harpur highlighted the differences between the Settlement and the French Concession:

Table 5.15

Total Mileage of Motor Roads in Shanghai Area

<u>Under Control of International Settlement</u>	<u>Under Control of French Concession</u>	<u>Under Chinese Control</u>
138.279 miles (surfaced)	64.617 miles (all surfaced)	186 miles (mostly ash)
44.749 (mud)		
183.028 (total)		

Area of Shanghai Districts

Area of International Settlement	Area of French Concession	Area under Chinese Control
Acres	Acres	Acres
5,723	2,525	122,265

Major Roads in International Settlement Boundaries

Road	Miles
Edinburgh	0.568
Public School for Girls	0.568
St. George's	0.322
Hardoon	0.379
Yates	0.795
Mohawk	0.492
Chekian	0.643
Sassoon House	0.719
Chapoo Road Bridge	0.492
Boone	0.397
Jukong	0.416
Japanese Public School	0.511
Hongkew Park Gate	0.568
Total	6.87 ²⁶⁰

²⁶⁰ "Letter from C. Harpur: Commissioner of Public Works to E.B. Howell, Esq.: Byeways, Chalfont St.Giles, Bucks, England." March 27, 1935. Shanghai Municipal Archives.

Harpur wanted to make sure the Municipal Council as well as his colleagues in England was well aware of accomplishments under his leadership as the Commissioner of Public Works. In his annual reports, he reiterated his achievements and the differences in road and mileage between the Settlement and the French Concession. While Harpur took the credit for road expansions and renovations instead of sharing the recognition with the engineers and surveyors, road constructions were indeed faster and more roads were paved than in the French Concession. The International Settlement had more than twice as much in total mileage of paved roads than the French Concession, and access and mobility were more convenient for residents in roads and alleyways than the French area. The major difference between the foreign controlled territories and the Chinese city was the roads under foreign control had surfaced pavement while the Chinese roads were mostly ash.

In 1940, the Municipal Council released a report with data on public and private roads within the Settlement. Public roads are considered to be public property and under the direct control of the Council, while private roads are residential homes and private property owned by landowners and real estate developers.

Table 5.16

District	Public Roads & Alleyways	Private Roads & Alleyways	Total
Western	24.18 miles	108.59 miles	132.76 miles
Central	2.83 miles	36.40 miles	39.23 miles
Northern	4.52 miles	48.38 miles	43.90 miles
Eastern A	14.87 miles	73.48 miles	88.35 miles
Eastern B	14.84 miles	17.23 miles	32.07 miles
Total	61.24 miles	284.07 miles	336.31miles ²⁶¹

²⁶¹ "Mileage of Private Roads, Private and Public Alleyways." Shanghai Municipal Council Report. May 20, 1940. Shanghai Municipal Archives.

Most of the roads and alleyways fell under the category of private, as residential homes and private businesses comprised the majority of the area in the International Settlement. Public roads were where government buildings, large department stores, public schools, shopping, and entertainment centers were located.

In May 1943, the Council's Cadastral Plan set exact boundaries to each district and created health departments and revenue offices in each district.

Western District

Northern Boundary: Soochow Creek

Western Boundary: Boundary Line of the International Settlement

Southern Boundary: Avenue Edward VII-Avenue Foch, Luzon Road

Eastern Boundary: Yu Ya Ching Road

Central District

Northern Boundary: Soochow Creek

Western Boundary: Yu Ya Ching Road

Southern Boundary: Avenue Edward VII

Western Boundary: the Whangpoo River

Northern District

Northern Boundary: Boundary Line of the International Settlement

Southern Boundary: Soochow Creek

Eastern Boundary: Hongkew Creek

Eastern District A

Northern Boundary: Boundary Line of the International Settlement

Western Boundary: Hongkew Creek

Southern Boundary: The Whangpoo

Eastern Boundary: The Yangtszepoo Creek

Eastern District B

Northern Boundary: Boundary Line of the International Settlement

Western Boundary: The Yangtszepoo Creek

Southern Boundary: The Whangpoo River

Eastern Boundary: Boundary Line of the International Settlement²⁶²

Three days later on May 17, the Council set the sub-division of the Settlement by various departments. Upon the recommendation of the Commissioner of Public Works, the Settlement

²⁶² "The Commissioner of Public Works- For Land Surveyor." Shanghai Municipal Council Document. May 14, 1943. Shanghai Municipal Archives.

was divided into five districts, each with a land office. For the convenience of building surveyors, each district had been subdivided into blocks: Central district= 25 blocks, Northern= 20 blocks, Eastern A= 36 blocks, Eastern B= 29 blocks, and Western= 39 blocks. The health department and revenue office in each district would be in charge of providing health care and collecting tax revenues from residents living in each respective district. The police department had divided the Settlement into 13 districts with a police unit patrolling each district. The police districts were Pootoo Road, Gordon Road, Bubbling Well Road, Sinza Road, Chengtu Road, Lousa Road, Central District, West Hongkew, Hongkew, Kashing Road, Wayside, Yulin Road, and Yangtszepoo.²⁶³ The plans were made under the period of Japanese occupation.

Chinese City

Chinese authorities faced many more challenges than the foreign territories in dealing with road construction. Unlike foreigners, who could rely on experienced civil engineers and surveyors that had worked on major urban cities in the West, the Chinese did not have the pool of well-trained engineers. Most of the roads in the Chinese districts of Nanshi and Zhabei were unpaved or paved with ash. Population increases had put a tremendous amount of pressure for the Chinese government to build wider and more accessible roads. Having seen the foreign territories undergo successful road widening, extensions, and constructions of new roads that connected busy commercial spots together, the Chinese looked to the foreigners for suggestions.

Much of the road constructions in the Chinese controlled territories of Nanshi and Zhabei came much later than the road widening and expansions in the International Settlement. In the late 1920s, the Guomingdang had solidified much of the political control over the country by defeating regional warlords and geared their focus toward urban development. For the GMD, it

²⁶³ "The Commissioner of Public Works-Sub-Division of Settlement by Various Departments." Shanghai Municipal Council Document. May 17, 1943. Shanghai Municipal Archives.

would be crucial to provide economic development in order to win over the civilian population's support and to further establish credibility and legitimacy over the Chinese sections of the city they had control of.

On February 2, 1929, the Shanghai Special Municipality's government decreed that major roads would be widened to ensure vehicle and pedestrian safety, and to allow for more traffic flow. Mayor Zhang Dingpan ordered heavy government investments to be made in road renovations. In the first stage, the following roads would be widened:

Table 5.17

Road	Width (<i>chi</i> , 1 <i>chi</i> = 33.33 cm)
Donglu Yuan	40
Pubing	40
Shenjia Garden	50
Longhua Zhen	20
Anhai	30
Houjiabing	36
Luban	50
Xietu	50
Rijun	40
West Rijun	30
Lujiabing	80
Chaoxie	22
Huining	40
Xiexu	40
New Guangdong	12
Haichang	20
Changan	20

Table 5. 17 Continued

District	Road	Width (<i>chi</i>)
Gaoqiao	Haigao	10
Zhenruo & Pusong	Zhenbei	10
Zhenruo Square	Zhenda	10
Zhenruo	Zhennan	10 ²⁶⁴

The following year on March 13, 1930, more road widening was ordered by the Chinese municipal government. Attention was focused on not only making the roads wider, but on connecting roads to each other to make travel and transportation smoother.

Table 5.18

District	Road	Width (<i>chi</i>)
Luxi	Zhenning	15
	Huashan	25
	Yejiamao	15
	Kaixuan	18.3
	North Caoxi	40
Zhabei	northern part of Xinmin	30
	Song Park	45
Yinxiang	southern part of Jimei	35
	middle part of Silian	12.2
City Center	Pentagon square of Xiangying	35
Pudong	South Madou	20
	southern part of Nanpu	35
Wusong	Tongsong	35
	Shuican	10 ²⁶⁵

Shen Yi, the Chinese Commissioner of Public Works often consulted with Charles Harpur of the International Settlement for advice. In a letter from Harpur to Shen dated on September 17, 1930, Harpur wrote to Shen regarding plans relative to the alignment of the

²⁶⁴ "Shanghai Special Municipality Government Decree: Mayor Zhang Dingpan." February 2, 1929. Shanghai Municipal Archives.

²⁶⁵ "Shanghai Special Municipality Government Decree." March 13, 1930. Shanghai Municipal Archives.

Municipal Council roads where they would connect with the roads of the Chinese municipality. Harpur pointed out that road extension from Mokanshan Road to West Soochow Road would cut through well developed mill property and thus necessitate high cost and result in an indefinite delay in construction. He suggested that the scheduling of a road in this locality be deferred until an opportunity of making a connection appeared more favorable to both the Settlement and the Chinese municipality. With regard to Mokanshan Road, Harpur offered an alternative scheme that necessitated the scheduling of a road through the southern portion of the Cantonese Cemetery instead of bisecting it as present proposal indicated. This will provide further advantage of connecting the Robison Road in the Settlement with Kwang Tsao Road in the Chinese city. Harpur concluded by mentioning that Robison Road would be an important thoroughfare serving the western section of the Settlement and extending to Jessfield Park. He understood that Kwang Tsao Road was also of considerable importance to the Chinese municipality, and that such a connection would be mutually beneficial for both municipalities.²⁶⁶

On December 12, 1931, the Shanghai Special Municipality released government documents detailing the status of the roads under Chinese control, with their current widths. Significant renovations and upgrades were made in the Wusong and Luxi areas.

Table 5.19

Luxi

Road	Current Width (<i>chi</i>)
Caozhen	25
Yidingpan	25
Hongqiao	24.4
Daxi	21.3
Bailinan (west part)	20

²⁶⁶ "C. Harpur: Commissioner of Public Works to Shen Yi: Commissioner of Public Works, Municipality of Greater Shanghai." Shanghai Municipal Council. September 17, 1930. Shanghai Municipal Archives.

	Table 5.19 Continued
Bailinan (east part)	17.5
West Guangfu	18.3
Columbia	18.3
Fanwangdu	17.5
Kangneituo	15.2
Binglang	15.2
Haige	15
Xuhong	15
Yongxiang	15
Wuning	15
Shunyang	12.5
Xuanhua	12.5
Xuzhen	12.5
Didou	12.2
Longchang	10

Wusong

Road	Current Width (<i>chi</i>)
Waima	18.3
Songxing	10
Zhongxin	10
Wangzhen	10
Tongxing	7.5
Zitong	6
Peiji	6
Tongtai	6
Nanchang	6
Wenchang	6
Zhenwu	6
Hefeng	6
Dongsheng	6
Doushi	6
Guizhi	6
Hongyuan	6
Dongxin	6
Nanjing Hejie	5.5
Beijing Hejie	5.5

	Table 5.19 Continued
Youche Lane	5
Sixin Lane	5
Sanyi Lane	5
Peixiu Lane	5
Miantang Lane	4.5
Yongchang Lane	4.5
Pingyuan Lane	4.5
Jinlin Lane	4.5
Changchun Lane	4.5
Cunxin Lane	4.5 ²⁶⁷

Reduced government revenue, financial problems, and the Sino-Japanese War halted further road renovations until the end of World War II. From November 1946 to November 1948, the GMD turned their attention to the Huangpu district. New roads were built and older roads were renovated. This was the last urban development project by the GMD as they would be defeated by Communist forces and forced to evacuate Shanghai in May 1949.

Table 5.20

Huangpu

Roads	Width (<i>che</i>)
Tianmu	30
North Zhejiang	20
Central Zhejiang	20
South Zhejiang	20
West Nanjing	27.65
North Tibet	30-45 ²⁶⁸

²⁶⁷ "Shanghai Special Municipality Government Decree." December 12, 1931. Shanghai Municipal Archives.

²⁶⁸ "City Road Renovations from November 1946-November 1948." Shanghai Municipal Government Document. Shanghai Municipal Archives U215-1-4144.

The Chinese city began road constructions on widening and extending the lengths of the roads much later than the foreign controlled territories. A later starter, poor infrastructure, and the lack of experienced engineers and surveyors all hindered the road renovations project in the Chinese municipality. While roads were widened and lengthened, the grounds of the Chinese city remained primarily an ash-filled terrain. When it rained, the road surface became very difficult to navigate through. For these reasons, population density was lower and far fewer vehicles were on the roads than there were in the International Settlement or French Concession. Despite active government involvement in developing the urban infrastructure, the Chinese controlled territories remained on the periphery of Shanghai's rapid growth during the early 20th century.

Public Control and Private Responsibilities

In the International Settlement, the Municipal Council set forth the laws and regulations regarding all matters in the boundaries within their control. Their public revenues came from the taxpayers, or residents living under the Settlement's jurisdiction. The Municipal Council left the responsibilities of providing transportation to the private sector, and allowed the market forces to dictate the types of vehicles and options available for each form of transportation. The major responsibilities for the Municipal Council was to ensure public safety and set forth standardized license requirements to operate all forms of vehicles navigating on the roads. The Traffic and Licensing Bye-Laws Committee was formed in 1916, comprising of elected officials and engineers to set traffic laws and license regulations. By 1916, when the automobile, tram and trolley, and taxis have all arrived in Shanghai's roads, the Council felt such a Committee would be absolutely necessary to deal with so many different types of vehicles.

In their very first meeting, the Committee made five recommendations to the Council, which were immediately approved and set into law.

- 1) “The Police should insist upon slow moving traffic keeping to the sides of the roads and also upon pedestrian traffic, in busy streets, keeping to the footpaths as far as convenient and possible, without prejudicing the rights of such pedestrian traffic.”
- 2) “The licenses relating to ammunition, firearms and similar articles should contain a condition by which the Council may acquire such articles, when conveyed in bulk through the Settlement, to be accompanied by a police officer.”
- 3) “The licenses relating to the sale of ammunition and firearms should contain a condition by which the Council shall require the vendor, within 24 hours of sale to furnish the police with the name and address of the purchaser.”
- 4) If possible, an arrangement should be made between the Council and the Customs Authorities whereby the latter shall agree to furnish the Council with a full description of all ammunitions passing through their hands into and out of the Settlement.”
- 5) “It should be quite understood by all concerned that the annexed bye-laws are no way intended to prejudice the inherent right of any Ratepayers’ Meeting to criticize or amend any particular license condition or regulation.”²⁶⁹

Besides setting laws, the Committee did not favor any type of vehicle over another, or give preference to any private company seeking to capitalize on the public transportation needs of the Settlement’s population. The British owned Shanghai Electric Construction Company was the first to move into the mass transit market to provide service for the electrification of the routes that the trams would be used. The Shanghai Tram Company (Shanghai Dianche Gongsi in Chinese) was a British tram company that had seen the successes of the European multinational Tianjin Tram Company (Tianjin Dianche Gongsi) in Tianjin’s concessions. This company was convinced there would be a huge potential market for the trams once the road tracks were completed, and having seen the successful implementation of the trams in European cities, they were confident it would be well-received in Shanghai as well. The Shanghai Tram Company had

²⁶⁹ “Report of the Traffic and Licensing Bye-Laws Committee-Appointed at the Ratepayers’ Meeting of March 21, 1916.” Shanghai: Printed by Kelly and Walsh, Limited., 1916. Shanghai Municipal Archives: U1-16-184.

the first mover advantage in that once the tracks were completed they immediately introduced their trams into the city.



1914年山地拆除后改为道路 此为老北门人民路一带,已有了电车行驶

Figure 5.5: Tram Tracks Completed in International Settlement (1914)

Trams were especially effective for long distance commute because they were faster than buses, but tram routes had fewer stops.

Source: Xue, Liyong (editor). *Qiu Shanghai Zhujie Shenghuo* (Old Shanghai Concession Lifestyles). Shanghai: Shanghai Shehui Kexueyuan Chubanshe, 2002: p. 124.

The successes of the trams allowed the Shanghai Electric Construction Company to successfully lobby the Municipal Council to install rail-less electric cars: the trolleys. Their argument was the trolleys did not need tracks and would be less expensive to maintain. The Municipal Council approved this in 1913 and the following year, the Shanghai Tram Company introduced trolleys into the city. Since the Shanghai Tram Company had seized control of the tram and trolley market, no other British owned tram company could tap into the Shanghai market. The Shanghai Tram Company had been a huge success by introducing first, second, and third class seats to distinguish between the passengers; and by introducing multiple routes that covered all parts of the Settlement to make the passengers' commute much more convenient and accessible before. After seeing the successes of the trams and trolleys, and that passenger safety

was ensured, the Traffic and License Bye-Laws Committee did not interfere with the Shanghai Tram Company's operations as long as safety standards were met. The Shanghai Electric Construction Company managed to successfully lobby the Council's Public Utilities Committee to raise fares on several occasions to accommodate increasing costs of operations and maintenance.

The British owned British Bus Company (Yingshang Gonggong Qiche Gongsi) was the first mover to come into the bus industry. As buses became more popular in Western cities, the British Bus Company felt there would be demand for bus services in Shanghai. The British Bus Company believed they could provide a service for passengers who wanted to travel shorter distances and come move around more conveniently in the city center since the buses had more stops than trams and trolleys. Once the British Bus Company seized control of the bus market by gaining the approval of the Municipal Council in 1924, and through expanding their routes and stops, they were the only bus service in the Settlement.

Unlike the British Tram Company and Bus Company, the automobile and taxi industries had numerous competitors. In 1932, there were over 400 different automobile makers listed in Shanghai. However, the motor car trade in Shanghai was practically monopolized by the agents of around 20 automobile companies, which dominated more than 50% of the automobile business. The big players were American models such as Ford, Chevrolet, and Buick. The following are listed as the popular makes of the Shanghai automobile market:

Table 5.21

Make	International Settlement	French Concession	Total
Ford	803	671	1,474
Chevrolet	498	405	903
Buick	639	343	982
Morris	487	352	839
Overland	302	169	471
Fiat	300	136	436
Studebaker	297	115	412
Citronen	175	225	400
Austin	224	116	340
Essex	181	142	323
Renault	135	181	316
Nash	198	101	299
Chrysler	115	99	214 ²⁷⁰

American cars came to dominate the automobile industry in Shanghai by the 1920s. More American-made motor cars were introduced into the city than any other country, surpassing even British and French automobiles in the International Settlement and French Concession.

Table 5.22

	1925	1926
USA	578	1064
Great Britain	351	381
France	266	433
Canada	296	361
Other countries	148	107 ²⁷¹

The reasons behind the success of the American automobiles were more than just their quality. American motor companies aggressively marketed themselves in the advertisement

²⁷⁰ "Automobiles in Shanghai." *The China Yearbook 1932*, p. 319.

²⁷¹ "Shanghai's Record Trade in 1926." *The China Weekly Review*, October 1, 1927.

sections of Shanghai's newspapers such as *The North China Daily News*, *The Shanghai Municipal Gazette*, etc. American mass production also played significant roles in the dominance of the automobile market. David Hounshell described the successes of the assembly lines and interchangeable parts in Ford Motor Company's factories in *From the American System to Mass Production, 1800-1932*, which allowed Ford to produce more quantities of automobiles at lower prices.²⁷² The competitive advantages of mass production resulting in lower prices along with advertisements all contributed to the successes of the American cars. Likewise with trams, trolleys, and buses, the Municipal Council allowed automakers to set up their businesses in the Settlement without any interference as long as they met the laws and regulations for vehicles set by the Traffic and License Bye-Laws Committee.

Just like private automobiles, the taxi business in the Settlement was very competitive with numerous companies fighting to attract customers. The major players were the Huanqiu Taxi Company (Huanqiu Gongying Qiche Gongsì in Chinese), the Oriental Tax Company (Oriental Qiche Gongsì), Olivier Motorcar, Hanseo Magill Company, and Central Garage Company all had their own respective areas throughout the Settlement. While Huanqiu was the first to arrive in 1908, the other taxi companies all establish their businesses by 1911. The cars used and fares varied by each taxi company, and they all managed to gain their foothold in Shanghai due to the relatively small number of private automobile owners. Each taxi company was able to set their own fares without seeking the approval of the Council.²⁷³

In the French Concession, a similar French Municipal Council was established to govern the population under the French jurisdiction. After the creation of the French Municipal Council

²⁷² Hounshell, David. *From the American System to Mass Production, 1800-1932: The Development of Manufacturing Technology in United States*. Baltimore, MD: Johns Hopkins University Press, 1985.

²⁷³ Shanghai Gonglu Yunshu Weiyuanhui. *Shanghai Gonglu Yunshu Shi*. (Shanghai Road and Transportation History), first edition. Shanghai Shehui Kexueyuan Chubanshe, 1988: p.59.

in 1862, a series of public works took shape following the trends in the International Settlement. Road construction and the arrival of machine-powered vehicles appeared usually several years after the British controlled International Settlement as the French authorities paid careful attention and observation to what the British Shanghai Municipal Council was doing. Road construction projects were followed by work on drainage, paving, and sewers; funded by mandatory contributions through taxes from property owners living in the French Concession. From 1887, the French Council started a land register in order to raise local and property taxes. Road constructions were regulated and had to be approved by the French Council. Perspectives were defined, which doesn't seem to have been the case for the International Settlement, whence the difficulty of joint realization of infrastructure work, such as the filling-in of the Yangjingbang Creek, which had become an open sewer. Common projects were, nonetheless, completed, such as the slaughterhouse, the cemetery, and a fire department water tank, and traffic and police rules were decided jointly.

Created in 1906, the French Shanghai tram company fared well and by the 1930s had 100 trams, 60 buses, and 38 trolleybuses, and supplied countless households with electricity and water. Although its salaries were somewhat lower than those of its British rival in the International Settlement, the company was forward-looking and offered better welfare benefits: housing, relief funds, cost of hospitalization and treatment, school funds.²⁷⁴

Throughout the 1930s and 1940s, there were numerous tram strikes in the French Concession. During these strikes, the French Council stepped in to resolve tensions either through increasing wages for tram and trolley workers, raise fares to increase revenues, and

²⁷⁴ Camus, D. "'Paris of the Orient': The Shanghai French Concession (1849-1946)." *MEDICOGRAPHIA*, VOL 31, No. 2, 2009: p. 205-211.

pardon strikers in exchange for them to return to work.²⁷⁵ The French Bus Company (Fashang Gonggong Qiche Gongsi) was the only bus company that navigated through the Concession.²⁷⁶ The routes and distances covered were smaller than the British bus companies in the Settlement given the smaller size of the French Concession. However, just like the British, the French Bus Company focused on transporting passengers in the densely populated downtown areas through numerous stops every few blocks. American cars dominated the private automobiles in the French Concession just like they had in the Settlement. American cars such as Ford, Chevrolet, and Buick outsold French vehicles such as Renault.²⁷⁷

Chinese capitalists had sensed the opportunities to make profits by catering to the growing demand for better access and convenience in the Chinese municipality. They attempted to learn as much as possible from the foreign companies in setting up their own businesses. In the 1920s, Chinese taxi companies such as Eastern & Star Garage Company, Auto-Gastle, The Central Garage Company, and Yunfei all found growing number of wealthy clients like Chinese government officials and businessmen who wanted the comfort and privacy of personalized travel. The Chinese taxis provided this service for the Chinese elites and made profits.²⁷⁸ By the 1930s, more than two decades after the foreign territories, Chinese trams and trolleys appeared in the Chinese city and mapped their routes along busy roads.²⁷⁹ There were two Chinese bus companies that covered the territories of Nanshi and Zhabei. The Chinese Bus Company (Huashang Gonggong Qiche Gongsi) and the Nanshi Bus Company (Nanshi Gonggong Qiche

²⁷⁵ "The Shanghai French Tramway Strike". *The China Yearbook 1931*, p. 519.

²⁷⁶ Zhou, Yuanhe (editor). *Shanghai Jiaotong Hua Dangnian* (Words from Past Years of Shanghai Transportation). East China Normal University Press, 1987: p.83-85.

²⁷⁷ "Automobiles in Shanghai." *The China Yearbook 1932*, p. 319.

"Shanghai's Record Trade in 1926." *The China Weekly Review*, October 1, 1927.

²⁷⁸ Xue, Liyong (editor). *Jiu Shanghai Zhujie Shihua* (Old Shanghai Settlement History). Shanghai Shehui Kexueyuan Chubanshe, 2002, p. 127-131.

²⁷⁹ Jingdai Shanghai Shi Yanqiu, Shanghai Renmin Chubanshe, 1990: p.489 in Xiong, Yuezhi (editor). *Shanghai Tong Shi*. (The History of Shanghai). Chapter 5: "Jiaotong, youdian yu chengshi jichu shishe de wanshan". The 8th edition: Mingguo jingji. Shanghai Renmin Chubanshe, 1999: p.188.

Gongsi) avoided direct competition with each other by covering different territories through different routes.²⁸⁰

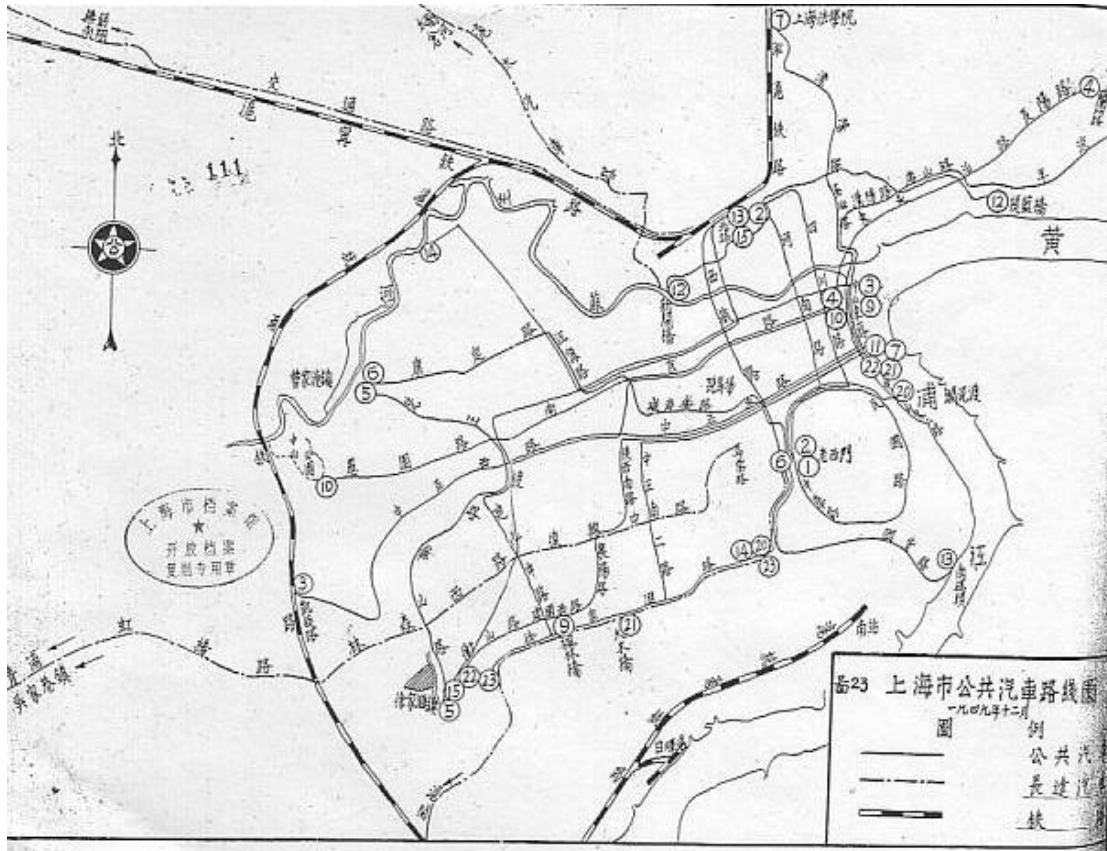


Figure 5.6: Bus routes in Shanghai (1949)

Buses were more effective for commuters to downtown areas because bus routes contained more stops than trams or trolleys. In downtown areas, there was a bus stop every couple of blocks.

Source: Shanghai Municipal Archives.

The Chinese capitalists had hoped for a strong Chinese government to lessen the foreign economic power and influence in Shanghai to the benefit of Chinese businessmen. Ironically, most Chinese capitalists desired to live in the foreign controlled International Settlement and French Concession because of better infrastructure and services, as well as the financial and

²⁸⁰ Shanghai Xiaolan Ben, 1931: p.300 in Xiong, Yuezhi (editor). *Shanghai Tong Shi*. (The History of Shanghai). Chapter 5: "Jiaotong, youdian yu chengshi jichu shishe de wanshan". The 8th edition: Mingguo jingji. Shanghai: Shanghai Renmin Chubanshe, 1999: p.188-189.

personal security afforded to them in living in foreign territories after they had made their fortunes doing business in the Chinese city.²⁸¹ While Chinese capitalists and the Chinese municipal government shared the mutual agenda of wanting to reduce foreign power and influence, the two groups differed on many major issues. The tensions and disagreements between the Chinese municipal government and Chinese capitalists prevented better collaboration and coordination throughout the 1920s and 1930s.

The Chinese capitalists were upset at the constant financial pressure they faced from the municipal government to pay more taxes to bankroll and fund the GMD's large scale projects. While their banks, businesses, and finances provided the GMD government with much of its income, the constant new taxes and forced loans imposed on wealthy Chinese capitalists caused them financial difficulties and eroded their support for the municipal government. The inability of the Chinese municipal government to challenge the foreigners and to take back foreign territories had been a long-standing source of shame and humiliation among the Chinese. This was especially true with the Chinese elites such as capitalists and intellectuals. The Chinese capitalists had felt the municipal government had been too weak to dare to fight for Chinese interests in the face of foreign powers, and this caused them to be extremely angry. The Chinese municipal government had been upset that so many of the wealthiest Chinese capitalists had lived in the foreign territories and were not paying their share of income and property taxes to the Chinese authorities. Lastly, tensions built up as more Chinese capitalists desired for a direct political voice in Shanghai politics.

The capitalists demanded for direct representation within the GMD party and for official recognition of the legitimacy for private capital. They set up organizations such as the chambers

²⁸¹ Coble, Parks. *The Shanghai Capitalists and the Nationalist Government: 1927-1937*. Cambridge, MA: Harvard University Press, 1986: p.26-27.

of commerce and banking associations in an attempt to influence public policy through effective lobbying and even threats of withholding their taxes. However, Chiang Kai-shek had established himself as the supreme leader of the GMD party and wanted to further solidify his political control. He was unwilling to allow any class or social group to become too independently powerful and repeated squashed attempts by wealthy Chinese capitalists to interfere with the GMD's state building plans.²⁸² In Chinese controlled Shanghai, the result was the GMD had the political power and the Chinese capitalists had the financial power. They had a tension-filled hostile working relationship with each other in that they both needed each other but could not agree on key principles.

Public Revenues

The International Settlement and French Concession both relied on public revenues from their populations to fund public works. The following data tables show the comparisons between British and French public revenues during the 1930s:

Table 5.23

1934

	International Settlement	French Concession
Total Revenues (\$ U.S.)	\$23,474,291.73	\$9,673,551.67
Principles sources of revenue		
Land tax	\$6,914,750.31	\$2,522,310.60
Rental assessment	\$10,996,562.17	\$3,252,139.05
License fees	\$3,090,685.63	\$2,039,642.01
Miscellaneous	\$1,980,169.49	\$814,137.84
Total Expenditure	\$23,028,220.81	\$9,406,591 ²⁸³

²⁸² Coble, Parks. *The Shanghai Capitalists and the Nationalist Government: 1927-1937*. Cambridge, MA: Harvard University Press, 1986: p.9-12.

²⁸³ *The China Yearbook 1935*, p.348-349.

Table 5.23 Continued

1936

	International Settlement	French Concession
Total Revenues (\$ U.S.)	\$23,613,265	\$9,576,228 ²⁸⁴

Throughout the 1930s, the International Settlement generated almost 2.5 times more revenue than the French Concession with a difference of \$23 million per year for the Settlement and less than \$10 million per year for the Concession. This significant gap could be attributed to the advantages the International Settlement had in land taxes, rental assessments, and license fees. Given the International Settlement had much larger sizes in terms of both surface area and population, the Settlement was about to generate far higher revenues and incomes after expenditures than the French Concession. Larger revenues meant higher expenditures on public works projects, thus allowing the Settlement to develop more roads, more routes, and more vehicles than the Concession.

In all three territories, the state, whether it was the Shanghai Municipal Council in the International Settlement, the French Municipal Council, or the Chinese municipal government had to satisfy the growing demands of the population under their jurisdiction. For the most part, all three governments were involved in setting the laws and regulations for road constructions, determining the location of routes to make traffic flow more smoothly, and to provide better access and greater conveniences to their passengers. The governments determined the requirements necessary for licenses, as well as ensured vehicle and pedestrian safety standards. The private sector was given the opportunities to capitalize on the growing demand for public transportation to make profits. In each of the three territories, private companies such as tram and

²⁸⁴ *The China Yearbook 1938*, p.297-299.

trolley companies, bus companies, automobiles, and taxi services were able to tap into this large consumer market and make significant profits. The increasing populations meant a growing demand for public transport services and options, and each form of private companies: trams and trolleys, buses, automobiles, and taxis had enough customers that needed their services.

In the tram and trolley business, the first mover advantage allowed the British Shanghai Tram Company and the French Tram Company to seize control of the market before anyone else. This occurred in the bus business as well with the British Bus Company and French Bus Company monopolizing the bus market. In the Chinese municipality, Chinese businessmen learned from the foreigners and established their own businesses to cater to the demands of the Chinese population. Two bus companies carved out their own respective territories in two different parts of the Chinese city. However, the automobile and taxi businesses saw a plethora of choices. American automobiles were able to aggressively advertise and market themselves, and through their mass production techniques that reduced prices found their way to become the dominant player in Shanghai's market. Numerous foreign as well as Chinese taxi companies all targeted the wealthy and elite in providing the comforts of private travel for those who want to avoid public transportation.

Comparing the three territories, the British controlled International Settlement developed urban infrastructure and introduced machine-powered motor vehicles the earliest. The International Settlement was ahead of the French Concession in terms of infrastructure, and the introduction of vehicles by a few years. The French modeled their plans after the British. The Chinese municipality lacked the financial resources and technical expertise, and developed much later than the foreign controlled territories. This caused the bulk of Shanghai's population to continue to reside in the foreign territories as infrastructure and services were much better there.

The growing feelings of nationalism and the rising power of the GMD party under Chiang Kai-shek set the stage for the Greater Shanghai Project in 1927: a plan by the Chinese government to transform Shanghai into the city where GMD political control could be strengthened and economic developments could be made to showcase a new and modern Chinese city.

Chapter 6

The Greater Shanghai Project- Part I (1927-1932): High Hopes and Optimism

After the Guomindang defeated the various regional warlords and began to strengthen their control over China, a new capital city was formed in Nanjing. The Nanjing Decade of 1927-1937 would see the GMD party attempt to consolidate and solidify their power through state-building programs aimed at fostering a sense of national loyalty under the banner of economic development. Shanghai's status as the most populous and most commercially important city would become the focal point of the GMD's state-building plans during this decade. The Greater Shanghai Project of 1927-1937 would be a massive restructuring project where the GMD, with the assistance from the Shanghai municipal authorities envisioned a radical transformation of Shanghai's urban landscape. Unable to take back the foreign concessions by force, the GMD strategized the creation of a new Shanghai: a city where a new city center would convince Chinese residents to move away from the foreign controlled territories to Chinese controlled areas. This would allow the GMD to solidify their power and control to a more grassroots level. To accomplish this ambitious plan, the GMD needed to use public transportation as a critical vehicle to implement their urban planning and construction. Their goal was the reconfiguration of space, where the bulk of Shanghai's Chinese population would leave the foreign territories and be resettled in newly constructed Chinese zones, where the GMD could enforce their control. To achieve these grandiose plans, the GMD needed the technological blueprint necessary to create a new and modern city from scratch, and they must do it quickly.

Chapter 5 and Chapter 6 will focus on the Greater Shanghai Project of 1927-1937. This chapter will describe the first half of the Greater Shanghai Project from 1927-1932. During this phase, questions such as what were the initial intentions of the GMD's new urban planning visions, why they selected the area of Jiangwan as their new city center, how they planned to build new urban infrastructure, their financial sources of public revenue, and the roles each

mayor played in implementing the GMD's actions will be discussed and analyzed. This chapter will critically breakdown the initial successes and triumphs the Greater Shanghai Project achieved in a short period of time, the challenges the GMD and local municipal authorities faced in continuing this Herculean construction project, and the unexpected difficulties they faced as they move toward the second half of their decade-long plan. In order to understand the purpose and mission of the Greater Shanghai Project, it would be crucial to realize the fundamental motives behind this political agenda, as well as the key actors involved and their personal outlook of this ambitious modernization plan.

This chapter will explain the reasons and motivations behind the timing of the Greater Shanghai Project. There were two major political agendas that the GMD government based in Nanjing wanted to achieve in this decade-long campaign. The first was to build a modern metropolis with a brand new city center located in Jiangwan, a previously remote and primarily unsettled territory that would attract large numbers of Chinese residents to relocate there. Second, the GMD wanted to show the foreign powers ruling over the concessions that a Chinese regime was fully capable of governing and presiding over a modern city. While the GMD could not recapture the foreign concessions by military force, such a modernization campaign would gain the GMD regime respect and credibility among both the Chinese and foreign residents of Shanghai. As an authoritarian regime, the GMD was well aware that the best way to gain the credibility and legitimacy of their political rule among the Chinese people would be through economic development, by improving the lives of the people they want to govern. By using the rhetoric of economic development under the banner of national interest, the GMD had hoped the Greater Shanghai Project would quickly gain the support of Chinese citizens, especially wealthy Chinese capitalists living in foreign concessions. If the people were fully behind this

modernization campaign, the GMD believed implementation of government policies, and eventually political consolidation and grassroots control would be easy to follow. This was the GMD's mission and purpose in orchestrating the Greater Shanghai Project in the summer of 1927.

While the Greater Shanghai Project could not be considered a success in that it failed to accomplish its original motives, the movement should not be considered a total failure. In this chapter, progress and improvements in urban infrastructure in the form of building new roads, improving access and mobility for commuters, and the construction of major buildings in the designated Jiangwan region will be discussed. In looking at the first half of the Greater Shanghai Project up until early 1932, it can be observed that the GMD had indeed achieved significant progress. They had learned from the foreign concessions in designing and building a new city center, and through heavy government investments, building plans that looked grandiose and overly ambitious seemed to be possible and realistic. However, Chapter 6 will address the reasons behind the demise of the Greater Shanghai Project through both external forces that the GMD could not control: the Japanese invasion and impending Sino-Japanese War as well as internal forces, most notably financial difficulties and limited public revenue that doomed the second half of the Greater Shanghai Project from 1932-1937. To fully understand the nature of the Greater Shanghai Project and the importance of Shanghai's strategic location to the GMD, it is important to understand the rise of the GMD as the political party that would rule China following the collapse of the last imperial dynasty: the Qing in 1911.

The Rise of the Guomingdang

When the Guomingdang party took power and founded the new Chinese Republic in 1912, they faced numerous challenges. After being ruled for thousands years under successive

imperial dynasties, GMD leader Sun Yat-sen felt that China was not yet ready for democracy. Accordingly, Sun came up with his three-stage idea, instituting that the Republican party (GMD) after attaining power, should lead the Chinese people first through military rule and then into a period of tutelage under the party's guidance. Only after a measure of wisdom and sense of responsibility have been achieved by the people, could they move into a period of genuine self-rule under the Republican constitution. Sun also determined that the GMD party would have a well-defined hierarchical structure, with members divided into three groups. Founding members such as himself would perform executive and legislative functions in the government; those who joined the party later on during the military rule could vote and hold office, while those who joined later could only have the vote only.²⁸⁵

While Sun Yat-sen was the most influential political leader, he was not as experienced in military affairs. General Yuan Shikai took power soon afterwards and when Yuan died in 1916, China lacked a strong centralized government. As a result, many regional and provincial warlords set up their own armies and controlled the power in their home regions or provinces. The GMD had limited political control in China outside of the major cities; and even in cities like Shanghai, the GMD were only able to govern small parts of the city not controlled by foreigners. When Sun Yat-sen died in 1925, a power vacuum occurred in the GMD leadership to replace him as the supreme leader of the party. Generalissimo Chiang Kai-shek, trained at the Whampoa Military Academy quickly assumed control of the GMD leadership. His first order of business was to launch a Northern Expedition to crush regional warlords and to bring all of China under GMD control. Chiang's military victories over warlords gave him enormous support and respect among the GMD's leadership. By the spring of 1927, Chiang's primary concern was

²⁸⁵ Spence, Jonathan. *The Search for Modern China*. New York and London: W.W. Norton & Company, 1990: p. 295.

no longer about the regional warlords his army had defeated, but the growing influence of the Chinese Communist Party based in Shanghai.

On March 21, 1927, the General Labor Union under Chinese Communist Party direction, launched a general strike and held an armed insurrection. Some 600,000 workers were involved and the city came to a standstill with power and telephone lines cut, police stations seized, and railway stations occupied. The strikers were under orders not to harm any foreigners, which the insurrectionists obeyed. Chiang's Nationalist troops entered the city in late March. Chiang had issued reassuring statements to the foreign community and praised the unions for their "constructive achievements." He held meetings with wealthy Shanghai industrialists, local officials, and the leading Green Gang gangsters and underworld figures. A secret alliance was formed between Chiang's GMD and the Green Gang to crush the Communist movement in the city. On April 12, the Green Gang assisted by troops from Chiang's Nationalist army attacked the headquarters of all the city's large unions. Many union members suspected of being Communists or Communist sympathizers were killed, hundreds more were arrested and imprisoned. When Shanghai workers staged a mass protest rally the next day, the GMD troops fired on them and killed many protesters. More arrests and executions of suspected Communists continued in the following weeks. The General Labor Union organizations were declared illegal, and all strike activities were forbidden in the city. What would be later known as the "Shanghai massacre of 1927" was over and the GMD had consolidated their power over the Chinese city.²⁸⁶

²⁸⁶ Eastman, Lloyd. *The Abortive Revolution: China Under Nationalist Rule, 1927-1937*. Cambridge, MA: Harvard University Press, 1990.

Wilbur, C. Martin. *The Nationalist Revolution in China, 1923-1928*. Cambridge, UK: Cambridge University Press, 1984.

Spence, Jonathan. *The Search for Modern China*. New York and London: W.W. Norton & Company, 1990: p. 353-354.

Chiang Kai-shek had sent a clear message to the Chinese residents of Shanghai. Labor unions had long been suspected of being under Chinese Communist Party (CCP) influence. As the GMD moved in to strengthen their stronghold over the Chinese sections of the city, the events in the spring of 1927 clearly showed that crushing their political opposition and solidifying their power over the city was of paramount importance and of the highest priority to the GMD regime.

The relationship between Chiang and Shanghai's capitalists and industrialists had been contentious. Chiang needed to raise millions of dollars per month in order to pay his Nationalist troops and to ensure the final stage of his Northern Expedition against the warlords would succeed. Chiang used the intimidation approach to force the chairman of the Shanghai Chamber of Commerce to provide the bulk of a \$10 million loan, and confiscated the man's property when he refused, sending him into exile out of Shanghai. Wealthy businessmen were forced to buy 30 million yuan of short-term government bonds, with the bigger corporations each assigned quotas of 500,000 yuan or more. Children of leading industrialists were often arrested as "counterrevolutionaries" or "Communists", and were only released after their families had given significant donations to the GMD.²⁸⁷

Chiang had been careful to avoid any conflict with the foreign authorities governing the Western concessions. He had discovered that the Shanghai underworld consisted of several powerful organizations, most notably the Green Gang that could provide him with the assistance he needed to stamp out the Communists. By forging an alliance with the Green Gang, the GMD could utilize the Green Gang gangsters to carry out assassinations on suspected Communists, even in foreign controlled territories. The Green Gang gained official protection and

²⁸⁷ Spence, Jonathan. *The Search for Modern China*. New York and London: W.W. Norton & Company, 1990: p. 361.

endorsement from the GMD, and its leaders such as Du Yusheng were able to gain huge profits through the drug trade with government approval.²⁸⁸

The GMD's Minister of Finance was T.V. Soong, an American educated financier and Chiang's brother-in-law through his second marriage to Soong's sister. T.V. Soong had extensive commercial and industrial connections in Shanghai and had built close ties with Shanghai's leading capitalists. Soong renewed his connections with the capitalists by creating three advisory commissions: government bonds, budget, and banking & commerce. However, Chiang grew suspicious of Soong's relationships with the capitalists and had him replaced as minister of finance. Chiang put tremendous pressure on the capitalists to make financial contributions to the GMD party. Coercion was forced upon the capitalists to purchase new bonds issued by the Nanjing government. Beginning in May 1927, the GMD officials under Chiang's direct orders went from all of Shanghai's major commercial, banking, and industrial establishments to force them to buy large quantities of government bonds.²⁸⁹ By early 1928, it was clear that financial sources from Shanghai provided the bulk of the funding for Chiang's GMD government. For the Shanghai capitalists, they had felt they had been deceived by Chiang's GMD. The capitalists had allied with Chiang in order to prevent the Communist-dominated labor unions from threatening their financial interests. But the Shanghai industrialists had not realized that despite being the most powerful economic group in China, they had not been able to transform their economic power into political influence. They would now face direct political control from the GMD regime beginning in 1927.²⁹⁰

²⁸⁸ Wakeman, Frederic. *Policing Shanghai, 1927-1937*. Berkeley and Los Angeles: University of California Press, 1995.

²⁸⁹ Coble, Parks. *The Shanghai Capitalists and the Nationalist Government, 1927-1937*. Cambridge, MA: Harvard University Press, 1986: p.31-34.

²⁹⁰ Coble, Parks. *The Shanghai Capitalists and the Nationalist Government, 1927-1937*. Cambridge, MA: Harvard University Press, 1986: p.46.

The Blueprint of the Greater Shanghai Project

The idea behind the Greater Shanghai Project was first conceived in 1925 just prior to Sun Yat-sen's death. In a book Sun published that year called "Strategy of National Construction", Sun defined several goals he had in order for China to modernize and catch up with the West. The central idea was to build a metropolis that would be both large and modern, in both its structure and functioning in order to make Shanghai become the great port of the East. In Sun's book, a chapter was focused on "Material Construction", where Sun suggested the building of a major port city in Hangzhou Bay in Zhejiang province, south of Shanghai. Under this plan, Sun mentioned that he deliberately recommended a deep-water site where there would be no risks of ships being caught in the silt. Shanghai was considered risky because of the considerable silt brought in by the Huangpu River and the Yangzi. Sun had planned to dig a 45 kilometer long canal through Pudong, on the eastern side of the Huangpu River so that deep water wharves could be built to protect it from the currents.²⁹¹

After Sun's death, the GMD began to greatly emphasize the importance of the strategic location of Shanghai as the center of the country's modernization plan. Shanghai was becoming the most populous and prosperous city in China, but the bulk of the city was under foreign control. For the GMD regime to gain credibility and legitimacy, they needed to reconstruct Shanghai to not only improve the conditions it had encountered in the Chinese city, but to radically transform the face of the city when the modernization campaign was to be fully carried out. The Greater Shanghai Project (*Da Shanghai Jihua*), meaning "Big Shanghai Plans", was

²⁹¹ Sun Zhongshan. *Jianguo fanglue* (The Strategy of National Reconstruction). Shanghai: Minzhi shuju, 1925: p. 153-160.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 175-176.

constructed out of both Sun's call for national construction, and based on the analysis of the city by local municipal leaders.

By the early 1920s, several locations around Shanghai had become major commercial centers where much of the city's trade, shopping, leisure, entertainment, and schools had been located. These areas where the primary routes, lines, or stops of public transportation had been designated in order to make the commuters' travel quicker and more accessible. These areas included Jingan Temple (Temple of Peace), Xujiahui, Caojiadu, Beizhan, Tilanqiao, and Laoximen. The streets near Jingan Temple were filled with tents and stalls, where an annual temple fair was held each year. A two mile long road had been constructed from Nanjing Road to the temple, and this became an elegant street in west Shanghai that was home to major shopping malls. Xujiahui was at the heart of the French Concession, and home to Shanghai's Catholic population. The oldest Catholic Church was built in Xujiahui in 1847, and later a Gothic Catholic cathedral was added in 1910. Other churches, schools, libraries, museums, presses, charities, and an observatory were all located there, making this area the center of Catholicism in China. Caojiadu contained cotton mills, flour mills, leather factories, light bulb factories, and many other factories. Wholesale firms specializing in agricultural products were opened there to take advantage of the convenient location on the banks of Suzhou Creek. Caojiadu had become Shanghai's industrial center by the 1920s, and new roads were built to connect the area to the western part of the International Settlement. In addition in industry and commerce, St. John's University and Jessfield Park were located within walking distance of Caojiadu. Beizhan, or Northern Station was home to the city's major railway station. The railway station completed in 1909, was where the Shanghai-Nanjing and Shanghai-Wusong railroads intersected. This area was at the boundary of the northern part of the International Settlement and the Chinese district

of Zhabei. Under the GMD, Beizhan and its local vicinity was considered to be the most developed area under Chinese administration. Tilanqiao, or Bamboo Basket Bridge was the major commercial area in Hongkou in northeast Shanghai. Farmers, peddlers, pilgrims, and others set up their markets on the streets near Tilanqiao. The growth of the foreign territories south of Tilanqiao made it busier and more crowded than ever because this bridge was the only surface route into the city. Laoximen, or Old West Gate was part of the old walled city built in 1553 to protect the city from pirates. Originally, it served as the boundary between the Chinese old city and the French Concession, but in 1912-1914, its wall and gates were torn down, the area merged with the French Concession.²⁹²

With the exception of Beizhan, all the other locations where the most vibrant and prosperous commerce, as well as the busiest traffic and flow of people were all under foreign control. This had brought considerable shame and frustration to the GMD's Shanghai municipal officials. The Chinese municipal officials sent an observation team to investigate the major roads in the International Settlement to see how the urban planning and road construction projects were carried out in order to learn from the British as to how to develop a similar system in the Chinese city. Data was compiled on the length and width of major roads in the International Settlement that underwent widening or extensions between 1916-1925.

²⁹² Lu, Hanchao. *Beyond the Neon Lights: Everyday Shanghai in Early Twentieth Century*, Berkeley, Los Angeles, London: University of California Press, 1999, p.278-281.

Table 6.1

Length and Width of Major Roads in International Settlement (1926)

Western Territory

Road Name	Length (feet)	Width (feet)
Robison	7,500 +	50
Kiaochow	1,700	50
Penang	2,500	50
Singapore	3,550	60
Connaught	4,000	60
Jessfield	14,000	50-60
West Soochow	1,000	30
Tifeng	4,000	50
Kinner	2,300	40
Yuyuan	8,000	60
Bubbling Well	2,200	70
Great Western	19,000	70
Edinburgh	7,000	50
Tunsin	5,000	50
Columbia	7,000	50
Fawha	5,300	50
Jordan	5,500	50
Keswick	11,000	60
Hungjao	35,000	40
Fraser	2,300	50
Jernigan	3,000	50
Lincoln	14,000	50
Warren	12,500	50
Macleod	7,000+	50
Rubicon	14,000	50
Pearce	12,000	50
Monument	15,000	50
Brenan	18,350	50

Table 6.1 Continued

Northern Territory

Road Name	Length (feet)	Width (feet)
Wanglo	1,200	30
Kiangwan	4,500	50
Scott	2,000	40
Darrock	1,700	20
Barchet	400	20
North Szechuan	8,000	50
Haskell	700	30

Eastern Territory

Road Name	Length (feet)	Width (feet)
Urga	1,000	50
Dixwell	5,000	50
Harbin	150	40 ²⁹³

Besides being better constructed and well-paved, the two busiest commercial streets running across Shanghai were Nanjing Road in the International Settlement and Avenue Joffre (Huaihai Road) in the French Concession.²⁹⁴ The Chinese authorities had been quite envious of the successful development projects in the foreign territories, but had been unable to respond with an urban renewal of their own. By the spring of 1927, the GMD had mobilized an authoritarian and centralized regime, defeated the regional warlords, and crushed the worker uprising of suspected Communist sympathizers in Shanghai. The timing was right for the Greater Shanghai Project to take place, and to transform Shanghai into the Chinese metropolis that could rival the prosperous and majestic cities of the West.

²⁹³ Xue, Liyong (editor). *Qiu Shanghai Zhujie Shenghuo* (Old Shanghai Concession Lifestyles). Shanghai: Shanghai Shehui Kexueyuan Chubanshe, 2002: p. 97-99.

²⁹⁴ History Department of Shanghai Normal University (editors). *Shanghai Waitan Nanjing Lu Shihua* (The History of Shanghai's Nanjing Road on the Bund). Shanghai: Shanghai Renmin Chubanshe, 1992.

G. Zay Wood, the former Commissioner of Public Affairs in the International Settlement wrote an editorial in *The China Weekly Review* on October 29, 1927 suggesting that a “moderate” redemption of Shanghai would be the best approach. While Wood praised the GMD for their ambitious plans, he asked them to set short-term goals that could be achieved before progressing to long-term plans. Wood noted that Huang Fu left office after being mayor for only three months, and that the new municipal administration needs to set realistic goals for their campaign. Wood wrote that the main difficulty for the Chinese administration was that although Shanghai is the first commercial port and wealthiest city in China, the bulk of its wealth remained in the foreign settlement. Given that the Chinese municipality lacks much of the existing infrastructure that the foreign settlements had, he suggested they focus on raising sufficient funds and set modest building plans at first. After initial development plans have been accomplished, and sufficient funds from revenues have been generated should the municipal government tackle the more challenging building projects. Wood emphasized that the success of the Greater Shanghai Project would depend on the careful collaboration between Chiang Kai-shek’s GMD central leadership and the Shanghai mayoral leadership.²⁹⁵

The Municipal Officials and Bureaus

In April 1927, the GMD officially moved the national capital to Nanjing, and set two cities Nanjing and Shanghai as special municipalities. The special municipalities were under direct central government control, rather than under any provincial government. Huang Fu was appointed as the first mayor of the Shanghai special municipality in May 1927. After discussions between the GMD’s central leadership and Huang, the Shanghai municipality would be governed

²⁹⁵ Wood, G. Zay. “Chinese Favor “Moderate” Redemption of Shanghai.” *The China Weekly Review*, October 29, 1927, p.20.

by a 15 man administrative committee (*xingzheng weiyuanhui*) presided by mayor Huang. However, the members of the committee would be appointed by the central government.²⁹⁶

The Shanghai special municipality also changed the territorial boundaries and demarcation of Shanghai. The two counties of Shanghai and Baoshan were now combined into a single administrative municipality. Shanghai now stretched over a vast territory that consisted far beyond just the city proper that had been considered “the Chinese city” to include many surrounding villages and hamlets under its jurisdiction. The total area of Shanghai covered 695,783 mu (464 square km). The area occupied by the International Settlement and the French Concession amounted to just 7% of the total figure, with the International Settlement covering 33,503 mu (22.6 square km) and the French Concession covering 15,250 mu (10.22 square km). The overwhelming majority of the territory was agricultural land that was sparsely populated. The new administrative municipality was divided into 17 urban and rural districts (*qu*).²⁹⁷

Huang Fu was appointed mayor by Chiang Kai-shek. Huang had been a close friend of Chiang and had worked as China’s prime minister, education minister, and foreign affairs minister. He had little to gain from serving as Shanghai’s new mayor, and having only the power to control the Chinese sector of the city. He was not a member of the GMD and had little interest in managing such a difficult and complex situation as in Shanghai. However, given his personal friendship to Chiang, Huang accepted the post.²⁹⁸ On July 7, after Huang had organized the municipal services, the members of the new municipal government were sworn in before Chiang Kai-shek. In his inaugural speech as the new mayor, Huang made cautious remarks and asked for

²⁹⁶ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 26-27.

²⁹⁷ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 27.

²⁹⁸ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 22.

the cooperation of the entire population, both Chinese and foreign. Huang was careful not to make any overly ambitious or unrealistic promises. He encouraged the residents of Shanghai to feel optimistic about the future of their city.²⁹⁹

The municipal government was divided into eight bureaus that reported directly to the mayor and the secretariat (second-in-command). These eight bureaus were Public Security and Interest, Social Affairs, Education, Finance, Health and Hygiene, Public Utilities, Land, and Public Works. The four bureaus considered to be the most important were the Finance, Public Security, Social Affairs and Public Works. The mayor would be aided by a secretariat, responsible for any administrative tasks and matters that did not come under a particular bureau. Two councilors prepared notices, regulations, and other municipal documents that had to be presented to the mayor or discussed with the municipal council. The executive arm of the municipal was the administrative council. This governing body made all the major decisions and drafted all the regulations relating to municipal affairs. The council was led by the mayor, who served as the chairman, the bureau directors, the secretariat and councilors, and three to five delegates of the council. Important discussions were usually voted on, however, the mayor had the power to prevail over the will of the entire council and could overrule any voting decisions if he felt necessary.³⁰⁰

In Christian Henriot's analysis of the directors of the bureaus, he found most of these chief municipal officials were non-natives of Shanghai.

Mayor Huang Fu's Administration (May-August 1927)

Bureau	Director	Home Province
General Secretariat	Wu Rongchang	Jiangsu

²⁹⁹ *Shenbao*, June 7, 1927.

³⁰⁰ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 32-33.

Social Affairs	Pan Gongzhan	Zhejiang
Education	Zhu Jingnong	Zhejiang
Finance	Xu Dingnian	Zhejiang
Health and Hygiene	Hu Hongji	Jiangsu
Public Security and Interest	Huang Qinglan	Jiangsu
Public Utilities	Huang Baiqiao	Jiangsu
Land	Zhu Yan	Jiangsu
Public Works	Shen Yi	Zhejiang ³⁰¹

The appointment of non-native Shanghai officials to serve as bureau directors could be explained by the fact that the core of GMD's central political leadership came from Zhejiang and Jiangsu provinces. Chiang Kai-shek himself was a native of Zhejiang, and given Zhejiang and Jiangsu's neighboring geographic proximity to Shanghai, the GMD could appoint officials who do not have biased attitudes or personal agenda that perhaps native Shanghai officials would have, but that they were still knowledgeable enough about the specific conditions about Shanghai to be able to serve as competent officials.

The previous experiences and career backgrounds of the municipal officials consisted primarily of former military men, politicians, technicians, financiers, and educators. Most had worked for the army and police, or for the GMD's central or local administration. A few were teachers or worked in private enterprise. All of the appointed municipal officials were considered to be very loyal to the GMD party.³⁰² When the first municipal government was set up in the summer of 1927, there were about 1,150 municipal employees who worked under each bureau. Gradually, this figure increased to 1,363 the following year, and reached 1,780 in 1930. The number of municipal employees, or public servants continued to increase where by 1933, the

³⁰¹ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 108-109.

³⁰² Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 115.

municipal staff had numbered 1,900, and in 1935 it reached a maximum of 2,200 before dropping to a low of 1,700 by December 1936.

Shanghai's population was estimated to be around 3.5 million at 1930, with about 1.7 million residents actually living in areas under Chinese control. A staff of around 2,000 meant an average of one government employee per 850 people. The reduction in municipal staff after 1935 was a result of payroll downsizing that brought the ratio to one government employee per 1,000 inhabitants. This ratio was mandated by the central government in order to streamline the administration throughout the municipality and reduce its working costs.³⁰³ In the early years of the municipal government, the expansion for government employees was because Shanghai had no centralized system of personal management. Each bureau had to recruit its own employees and then inform the Bureau of Finance for the financial requirements such as salary for their employees. Employees were not able to be transferred from one bureau to another as their staff requirements differed.

Essentially the bureau director ran his own fiefdom, where he retained control over his staff. There was no objective or standardized criteria for recruitment and selection of government staff such as bureaucratic exams. The bureau director was able to bring in staff members who would be loyal to him and followed his orders. The distributions of municipal staff were primarily local Shanghai residents. The technical bureaus such as Land, Education, and Social Affairs were overwhelmingly local but the bulk of Shanghai's policemen were from northern provinces. Most of the staff members were young and fairly well-educated. Young, educated men were particularly interested in pursuing a career with the municipal government because of the stable and well pay, as well as social respect from affiliation with the government. Women

³⁰³ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 119.

were virtually absent from the municipal administration where they made up of only around 4% (62 people total) of the employees. They were usually assigned subordinate positions and received lower pay than their male colleagues.³⁰⁴

A high percentage of municipal staff had been college-educated, and almost all had received secondary (high school) level education. Recruitment at colleges and universities had been quite successful as many young educated urban residents found government positions in the public sector to be attractive, given the good salaries and benefits. The mayor received a monthly salary of about 675 Chinese Yuan per month. The highest paid employees were the bureau directors, the secretary general, and the mayor's councilors. They received average monthly salaries of around 450 Chinese Yuan. Other high paying government employees included educated technocrats with post-graduate education. College educated staff members earned between 60-450 Yuan per month depending on their seniority, years of experience, and specific responsibilities. Middle level staff members received about 50-60 Yuan per month, and low level staff with limited education, experience, or expertise received between 20-50 Yuan per month. In the police force, the officers received about 30-40 Yuan, the brigade chiefs 16-18 Yuan, and a common policeman 13-16 Yuan a month. The lowest paid government employees were the janitors and garbage collectors, who received less than 10 Yuan a month.³⁰⁵

Huang Fu resigned as mayor in August 1927 and was quickly replaced by Zhang Dingpan in September. Zhang had been loyal to Bai Chongxi, Chiang Kai-shek's main rival within the GMD. Under Zhang, some of the bureau directors were retained while others were replaced or resigned.

³⁰⁴ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 120-121.

³⁰⁵ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 122-123.

Mayor Zhang Dingpan's Administration (September 1927-March 1929)

Bureau	Director
Harbor Affairs	Xi Dingmo
Social Affairs	Pan Gongzhan
Education	Bao Junjian, Lu Jiceng, Wei Que
Finance	Wang He
Hygiene	Hu Hongji
General Secretariat	Zhou Yongneng
Public Security	Dai Shifu, Huang Zhenxing
Land	Zhu Yan
Public Works	Shen Yi
Public Utilities	Huang Baiqiao

Pan Gongzhan, Hu Hongji, Zhu Yan, Shen Yi, and Huang Baiqiao were retained from Huang Fu's administration. These bureau directors were considered to be highly competent and skilled, and did not affiliated themselves too strongly with any particular GMD faction with the central government in Nanjing. Zhang Dingpan needed their experience and could work with them. The bureau directors who were replaced or resigned themselves after Huang Fu left office were considered to be Huang's loyal subordinates who would not fit in well with the new mayor.

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Zhang Dingpan was a military man with limited experience in administration. He was distrusted by certain GMD factions, and his appointment caused some tensions with the GMD party leadership. Once in office, Zhang was considered to have an independent stance in his political ideology. He was able to deal effectively with strikes and demonstrations when they occurred. The relationship between the GMD's central government and the Shanghai municipality became tense over the issue of national sovereignty. In Shanghai, where the city was divided into three administrative zones, national sovereignty inevitably dealt with the

³⁰⁶ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 110.

relationship between the Chinese municipal government and foreign authorities. The GMD asked the municipal government to forbid civil servants to live in residences belonging to the foreign settlements and demanded that all offices of official organizations be moved over to the Chinese zones. The irony was many of the leading Chinese officials resided in foreign territories because these neighborhoods were wealthier and more convenient. Even Mayor Zhang himself lived in the French Settlement. In December 1928, tensions between the GMD's central government and Zhang Dingpan's government resulted in the mayor resigning.³⁰⁷ Zhang had resigned because he could sense Chiang Kai-shek's power and influence had grown stronger within the GMD's central leadership, and given his previous alliance with Bai Chongxi and the Guangxi clique, Chiang would move to sack him from office.

After the Fifth Congress of the GMD's Shanghai section in February 1929, Zhang Qun was nominated to succeed Zhang Dingpan as mayor. Zhang Qun had come from Sichuan and like Zhang Dingpan before him, was a non-native of Shanghai. Zhang Qun continued to carry out the first half of the Greater Shanghai Project as dictated by the GMD, and retained much of the bureau directors from the previous administration.

Mayor Zhang Qun's Administration (March 1929-December 1931)

Bureau	Director
Harbor Affairs	Xi Dingmo
Social Affairs	Pan Gongzhan
Education	Chen Dezheng, Xu Peihuang
Finance	Wu Xiyong, Xu Fu, Tang Naikang, Cai Zengji
Hygiene	Hu Hongji
General Secretariat	Yuan Liang, Yu Hongjun
Public Security	Yuan Liang, Chen Xizeng
Land	Zhu Yan

³⁰⁷Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 40-43.

Public Works	Shen Yi
Public Utilities	Huang Baiqiao ³⁰⁸

Xi Dingmo, Pan Gongzhan, Hu Hongji, Zhu Yan, Shen Yi, and Huang Baiqiao were retained from Zhang Dingpan's administration, and all by Xi (director of newly created Bureau of Harbor Affairs) had been appointed when the Shanghai special municipality was first formed in July 1927. These veteran bureau directors had a proven track record of strong performances and avoided the political divisions within the GMD party. They had worked under three different mayors in just five years, and managed to build up their own power base in Shanghai by carefully selecting loyal followers into their respective bureaus. The Bureaus of Land, Public Works, and Public Utilities would prove to be the most important to carrying out the Greater Shanghai Project.

The Implementation of the Greater Shanghai Project

The three bureaus given the most direct responsibilities of transforming Shanghai's Chinese city into a modern metropolis were the Bureaus of Land, Public Works, and Public Utilities. The Land Bureau was responsible for taking the measure of the city through a general and detailed land survey, and determining the lands needed for the planned building works. Public Works and Public Utilities were involved in the implementation of the projects.³⁰⁹ The director of the Public Works Bureau, Shen Yi was considered to be the most skilled bureaucrat within the Shanghai municipality. Shen took a detailed tour of the Chinese zones of the city and saw that while buildings and housing projects were everywhere, they had been built with no plans and lacked public health and safety. He ordered his staff to set up teams to go around

³⁰⁸ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 110.

³⁰⁹ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 169.

Shanghai and register all existing properties and their conditions, by specially checking on all public property such as entertainment venues, restaurants, bars, etc. The results collected concerned him greatly, as he was shocked at the run-down and unsanitary conditions of many of these public buildings.

Shen ordered repairs to be made to all defective installations that were found and limited the number of people allowed into crowded entertainment areas and restaurants. Those who disobeyed orders or refused to have their property be checked would have their establishment be closed down. The Public Works Bureau inspected all the major buildings under Chinese control and ordered the most dangerous and unsafe ones to be demolished. The police were responsible for locating the buildings that were in poor conditions. This measure caused a lot of protests among the landlords who were afraid they would lose significant income if their buildings were destroyed. The bureau responded by informing the landlords whose property was about to be demolished beforehand so they would have enough time to make repairs or installations, or inform their tenants to move out. If landlords did not obey orders, demolition teams were called in to tear down dirty, unsafe, and run-down buildings by force.

The officials working for Shen Yi in the Public Works Bureau were mostly young college educated men. This bureau was considered to be the model bureau of the municipal government because corruption was very rare among Shen's staff. The practice of taking bribes, which had been much more common in other bureaus did not occur frequently in Public Works. This bureau was consistently praised by all three mayors for their efficiency and honesty. Shen Yi expressed clearly that anyone on his staff suspected of taking bribes would be fired immediately.³¹⁰

³¹⁰ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 170-171.

Shanghai as a city had been cut into two by the Huangpu River. To the east of the Huangpu, the large area of Pudong had been devoted to agriculture and had been sparsely populated. Pudong farmers provided the fresh food such as vegetables, fruits, and eggs that were sold in the markets west of the Huangpu, where the vast majority of Shanghai's population resided. However, the banks of the Huangpu were crowded with wharves, factories, and warehouses. A substantial amount of traffic in people and goods had to travel between the western and eastern parts of the Huangpu River each day. A ferry company was created in 1910 by the Pudong Dikes Maintenance Office. When the Shanghai special municipality was established in 1927, there were only seven ferryboats that could transport traffic across the river, of which only one was owned by the government and the other six hired.³¹¹ Beginning in 1929, the municipal government significantly improved existing facilities by building seven more wharves and dredging the riverbed so it could take bigger ships. In July 1930, Shen Yi's Public Works Bureau obtained from the Municipal Bank a loan of 360,000 Chinese Yuan to buy two ships and three ferryboats. The Public Works Bureau also began the construction of five additional pontoons that was completed in 1933.³¹²

Under Mayor Zhang Qun's leadership, the municipal authorities began building a larger civilian airport with pressure from the GMD to improve air communications for military reasons. The Longhua civilian airport was enlarged from 280 mu (1,867 square km, 1 mu= 6.667 square km) to 970 mu (6,470 square km).³¹³ The Public Utilities Bureau under the leadership of Huang Baiqiao made significant strides in water treatment and the production of electricity. An

³¹¹ Shanghai Tebie Shi Gongyong Ju Yi Lan (Shanghai Special Municipality Public Works Record), 1928: p. 72
Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 170-171.

³¹² Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 172.

³¹³ *Shenbao*, April 27, 1933.
Shenbao, April 28, 1933.

inspection in August 1927 showed that clean water was a problem. The bureau made the two water supply companies in Zhabei and Nanshi to build a water quality control laboratory to check on the purity of the water. Reports had to be sent to the Health Bureau, and unclean water would not be allowed to be used. Under Huang Baiqiao, the Public Utilities Bureau took over the distribution of water in the Chinese areas. By 1929, water rates were unified throughout the municipality and a considerable improvement in the quality of water was assured.³¹⁴ The bureau also focused their attention on improving electricity production. Huang ordered the bureau to restrict the production of electricity in the city to two large companies (one each in Nanshi and Zhabei) from eight electricity companies before in order to rationalize the system and reduce costs. The electricity installations were upgraded and modernized in order to increase their production capacity. From 1928-1930, the bureau sought to unify the electricity system in the entire city. In 1928, a new 20,000 kilowatt power station capable of producing its own electricity was built in Zhabei. In Nanshi, three additional turbines were bought to improve efficiency. Power stations in each district were connected to each other, linking up Nanshi, Zhabei, and Pudong. These works were completed in 1930 and the Public Utilities Bureau announced that the entire Chinese city had been linked in a single unified system.³¹⁵

The biggest challenge facing the municipal government was how to shift the Chinese population away from the foreign settlements to the areas under Chinese control. Public transportation would be absolutely vital for Chinese residents to be resettled. After reviewing the possible development of Shanghai under the circumstances of a divided city with foreign control, the municipal leaders came up with five conclusions. First, the road system was no longer suited

³¹⁴ *Shenbao*, May 3, 1929.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 173-174.

³¹⁵ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 174-175.

to the increased traffic and would be difficult to transform. Second, the city based on its original design could not absorb the increasing number of people who were crowding into the city each year. Third, the harbor installations were obsolete and could not cope with the increase in sea and river traffic. Fourth, there was no direct link between the harbor installations and the railroads. Fifth, the fact that Shanghai was split among three different municipal administrations would not allow for it to develop a plan for a unified development for the entire city.³¹⁶

Based on these findings, the municipal government determined that long-term solutions to the city's problems would have to be addressed through the development of a new city center, away from the downtown areas to the outside of the city. A new city center outside of the city would allow for the municipal authorities to rebuild the city on the exterior to allow for future expansions, and to provide space for the resettlement of the Chinese population. Under the municipal project, the critical area of this new building plan would be a civic center (*shi zhongxin*) where all government administrative activities would be located, and all branches of the municipal government could be brought together. It was determined that this location would be in Jiangwan, a flat region with little population where land was cheap and nothing needed to be demolished. Inside the civic center, several zones would be created with specific purposes. These zones included administrative (*xingzhengqu*), business (*shangyequ*), industrial (*gongyequ*), and residential (*zhuzhaiqu*).³¹⁷ The administrative and residential areas were to be located close

³¹⁶ Sha, Zengshao. *Shanghai Shi Zhi Dushi Sheji Yu Tudi Liyong*. (The Use of Land and Town Planning in the Shanghai Municipality). *Minguo Ershi Niandai Zhongguo Dalu Tudi Wenti Ziliao*, 1977, p. 48, p.416.
Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 176.

³¹⁷ Sha, Zengshao. *Shanghai Shi Zhi Dushi Sheji Yu Tudi Liyong*. (The Use of Land and Town Planning in the Shanghai Municipality). *Minguo Ershi Niandai Zhongguo Dalu Tudi Wenti Ziliao*, 1977, p. 48, p.527.
Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 177.

to each other, while the business and industrial areas would be placed further away in order to prevent disturbances to the residents.

The urban areas of Nanshi and Zhabei would be turned into strictly business zones. The underlying goals of the municipal government was the hope that the Greater Shanghai Project could effectively push the foreigners out by suffocating them in old Shanghai, while the new city center in Jiangwan would blossom and encourage Chinese residents to move there. This grand project caused for significant financial funding, with the first stage consisting of expenditure for 50 million Yuan, of which 20 million Yuan was needed to just to purchase the 27,000 mu (180,090 square km) of land in Jiangwan.³¹⁸

³¹⁸ Shen, Baijing. *Shanghai Shi Zhinan* (Guide to the Shanghai Municipality). Shanghai: Zhonghua Shuju, 1933: p. 372-379.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 177.

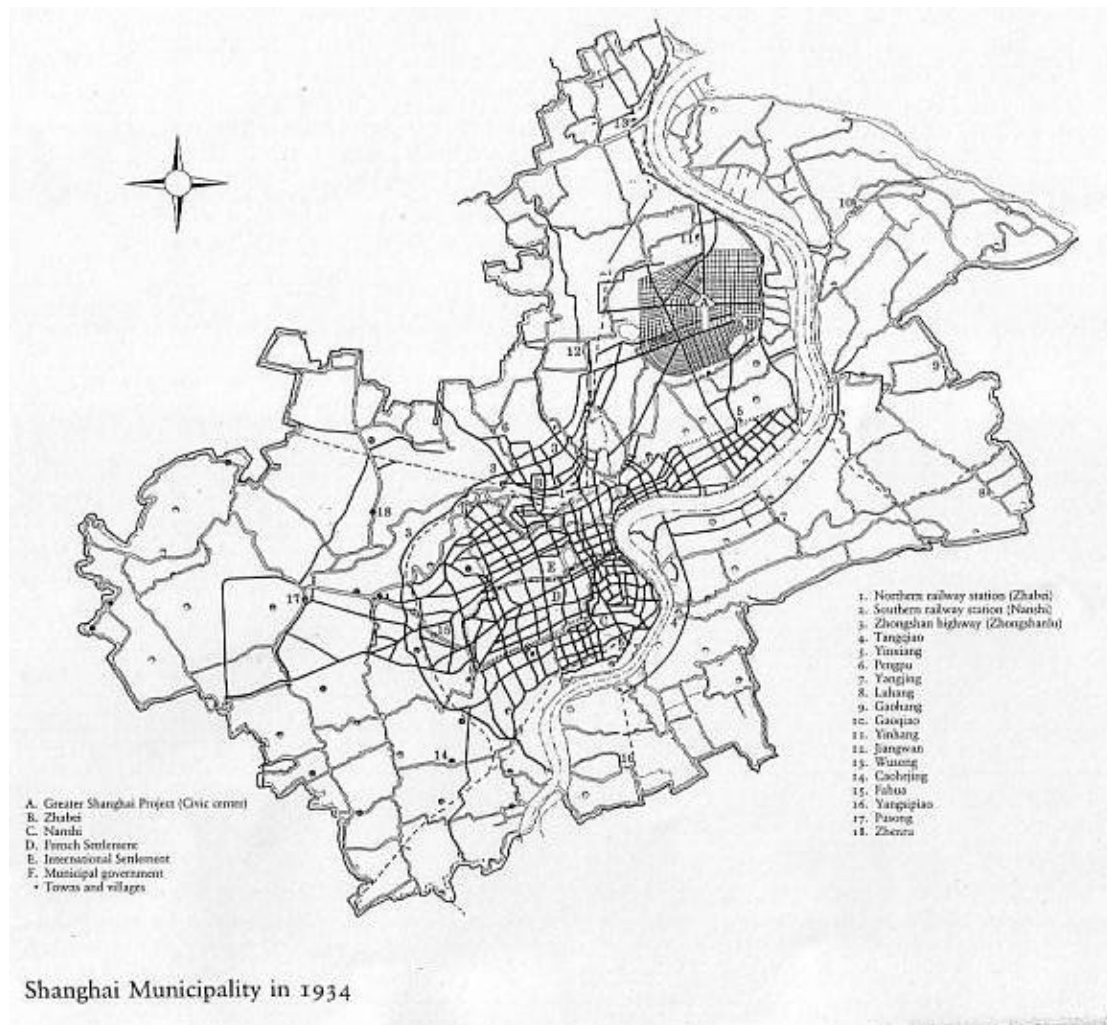


Figure 6.1: Layout of Shanghai (1934)

Section A: The new anticipated city center in Jiangwan, where the Greater Shanghai Project had hoped would the Chinese population of the city would resettle there.

Source: Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 28.

Huang Fu had initiated the Greater Shanghai Project under pressure from Chiang Kai-shek in July 1927. After he abruptly resigned, Zhang Dingpan was unable to obtain much financial support from Shanghai's wealthy elites to carry out the plans. It wasn't until Zhang Qun assumed leadership that the push for urban development picked up speed. In July 1929, Zhang Qun chose Jiangwan as the official site as the center of the new Shanghai. He set up two committees: the Urban Planning Discussion Committee and the Civic Center Building

Committee to schedule for the planning and carrying out of the new Jiangwan city center.³¹⁹

When Jiangwan was announced publicly as the location for the new city center, all transactions were halted to prevent land speculation. The municipal government purchased a greater area of land than necessary for their proposed city center. The excess land was to be sold off at a higher price to wealthy real estate developers to finance other urban infrastructure and development projects.

Mayor Zhang Qun ordered the rebuilding of major roads under Chinese jurisdiction immediately after he took office. On March 13, 1929, Zhang began the road upgrade project in Zhabei. The plans were modeled after the road extensions and widening in the International Settlement; where roads were to be lengthened to connect them to each other and the road tracks be widened to allow for more traffic flow and parking. Smaller roads near North Sichuan Road were ordered to be rebuilt in order to connect them southward from Zhabei to the border of the International Settlement. Roads near the railway station were ordered to be lengthened to 90-150 feet to better connect arriving passengers to the station. The main road leading to the station would be 180 feet long. Roads north of the railway station where there was less traffic were lengthened to 340-360 feet along. In areas where homes and buildings blocked traffic flow, these buildings were to be torn down and tenants notified in advance.

A few roads that contained heavy traffic flow would be rebuilt first. These included Songgongyuan Road, where the width of the road was widened to 24.4 feet across. Sanyang Road was also widened to 24.4 feet. Gonghe Road, which connected Zhabei to Jiangwan would be repaved. Datong Road, Hongxin Road, Yanjiage Road, Xinmin Road, Zhongxin Road, Wuhua Road, and Kulan Road were each widened to 18.3 feet across to allow for bus stops to be

³¹⁹ *Shenbao*, July 2, 1929.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.178.

placed. Qiujiang Road and East Qiujiang Road were widened to 15.2 feet, and Changchun Road was increased to 12.2 feet in width. Smaller roads were torn down or connected as extensions to larger roads, and major roads that were the locations of tram, trolley, and bus stops had to be repaved for better quality and smoother traction.³²⁰

In December 1930, Zhang Qun's government ordered the reconstruction of roads in Huxi district. Municipal officials felt urban reconstruction was absolutely necessary to prevent the foreign settlements from expanding further and taking more land. The major roads in Huxi must be rebuilt and repaved. Caozhen Road would be widened to 25 feet. West Guangfu Road, near the southern banks of the Huangpu River would be widened to 18.3 feet. Fanwangdu Road and Kaixuan Road were two major roads where numerous routes and stops were located, would be widened to 17.5 feet and 18.3 feet respectively. Yongyu Road would be widened to 15 feet, Bailinan Road to 20 feet, North Xinji Road to 22 feet, Daxi Road to 21.3 feet, and Hongqiao Road to 24.4 feet to allow for more vehicles and pedestrians to pass through.³²¹

The Chinese municipality paid special attention to improving the public health situation among its residents. Within the Public Health Bureau, four major divisions were set up to deal with health and sanitation issues facing the population. The Division of Administration & Vital Statistics, Division of Sanitation & Street Cleaning, Division of Veterinary Science & Meat Hygiene, and Division of Communicable Disease Control & Medical Inspection were formed. The Public Health Bureau was a reorganization of the former Department of Public Health that was formed in August 1926. For the 1927 fiscal year, a total budget of \$178,200 (U.S. Dollar)

³²⁰ Shanghai Special Municipality Government Document, March 13, 1929. Shanghai Municipal Archives, SC0033-SC0042.

³²¹ Shanghai Special Municipality Government Document, December 1930. Shanghai Municipal Archives, SC0112-SC0115.

was allocated to the Public Health Bureau. The distribution of the funds by division per month is as follows:

Table 6.2

Division	Monthly Budget
Administration, health education	\$3,500
Sanitation, street cleaning	\$500
Veterinary science, meat hygiene	\$850
Communicable disease control	\$1,000
Laboratory	\$1,000
Total	\$14,850 (per month)=\$178,000 (year)

In addition, there was a special appropriation of \$98,000 a year for the 1927 fiscal year for additional spending:

Table 6.3

Division	Yearly Budget
Public health, nursing	\$16,000
Medical inspection	\$16,600
Inauguration of rural health work	\$16,800
Laboratory buildings	\$30,000
Total	\$93,800 ³²²

The Public Health Bureau recruited several foreign educated physicians into their ranks including Dr. Hu Kou-ki as Commissioner of Health. Dr. Hu worked closely Dr. C. Noel Davis, Commissioner of Public Health in the International Settlement to come up with strategies to deal with infectious disease control. From working with Dr. Davis, Dr. Hu insisted that inspections be carried out in all major restaurants, grocery stores, and food factories to make sure health regulations were satisfied before licenses could be renewed. When unregistered shops or factories were found of making deliveries of food, they would be arrested and handed over the

³²² Hu, Hou Ki. "Chinese Municipal Health Work". *The China Weekly Review*, October 29, 1927, p. 58-59.

municipal authorities for violations of public health and sanitation laws. Dr. Hu also advocated for more rigorous training based on the model of medical school education in Western universities for Chinese medical schools.³²³

On April 3, 1929, a serious case of meningitis broke out in the Chinese municipality. The disease was first discovered in the town of Nanhuihsien, about ten miles southeast of Shanghai. The disease spread quickly into the city, and caused serious concern among public health officials. Dr. Hu immediately asked the Commission of Public Health of the International Settlement for help. British physicians came to the Chinese municipality, provided serum treatment for the sick patients, and quarantined the infected. The British physicians diagnosed this outbreak as a case of unclean sanitation in the Chinese city, and suggested for more rigorous food inspections and improving sanitation conditions.³²⁴ The Health Department took their advice seriously, and immediately implemented more rigorous sanitation standards. Learning from the International Settlement proved to be very helpful for the Department of Health, and on numerous occasions Chinese and British physicians worked together to combat infectious diseases or treated patients.

In May 1929, the meningitis epidemic seemed to be under control. The Health Department reported that from October 28, 1928 to April 29, 1929, a total of 108,428 persons were vaccinated for smallpox. In May 1929, a campaign for free typhoid and cholera inoculations had begun. A school health service was established in the Chinese municipality in February 1929. The service was given in 14 municipal schools with a student attendance of 10,000. All students attending these schools were physically examined. A dental clinic and an eye-ear-nose-throat clinic were established on May 1, 1929. A physician and nurse would visit

³²³ "The Council and Chapei Health Department". *The China Weekly Review*, August 18, 1928, p. 380-381.

³²⁴ "Meningitis-Another Cause for Health Cooperation". *The China Weekly Review*, April 6, 1929, p. 221-222.

each school twice a week for the treatment of minor ailments and for detection of communicable diseases. Vaccinations were provided; and public health lectures, exhibits, and first aid classes were taught in primary and secondary schools. A Committee for the Promotion of School Health was organized by the Bureau of Public Health to carry on the work.³²⁵

Cholera outbreaks have occurred periodically. In May 1930, the Public Health Bureau asked the Commissioners of Health in the International Settlement and the French Concession to work together to start an anti-cholera campaign. Each territory would carry out its duties independently in the way of supplying clean water, hospitalization, vaccination, and etc. but would all adopt a common method of reporting the sick first to the health authority where the patient resided, and then to a central cholera bureau established by all three governments. The anti-cholera vaccine was shipped to the Chinese laboratory with sufficient vaccine to immunize 300,000 people. All three municipal governments agreed to put up posters on telegraph poles, outside factories, restaurants, food markets, etc. exhorting the masses to take simple precautions against cholera by only drinking boiled water, cooked vegetables, and clean fruits by screening their food supplies from flies and from inoculation. Thousands of factory workers were vaccinated by the Chinese Health Department in a matter of months, and the Chinese Public Health Bureau felt confident cholera could be eradicated in the near future.³²⁶

An article appeared in *The China Weekly Review* on May 9, 1931 summarizing the progress and achievements the Greater Shanghai Project had already accomplished. The article reported that Shanghai was certain to become a bigger, prosperous, and more cosmopolitan city in the future. Based on its favorable geographic position as the largest sea port for international trade and as the center of communication and trade in China, Shanghai has achieved rapid

³²⁵ "Activities of the Health Department of Greater Shanghai". *The China Weekly Review*, May 18, 1929, p. 512.

³²⁶ Wu, Lien-the. "Cholera Prevention in Shanghai". *The China Weekly Review*, July 12, 1930, p. 213.

growth not only in population but in various industrial productions, commercial transactions, and general prosperity. Mayor Zhang Qun mentioned steps for the gradual constructions of the civic center building in Jiangwan, the construction of a harbor at Woosung (Wusong), a bridge to span the Whangpoo (Huangpu) River, tenement houses for laborers, and the conversion of the Confucian Temple in Nantao into a public park. The mayor quoted that “one of the greatest needs of Shanghai is the construction of the waterways to connect the Whangpoo River with rail lines. When such connecting waterways are constructed, the commercial and industrial center of Shanghai would be moved away from the foreign controlled settlement to the Kiangwan (Jiangwan) district.”

Recalling what had been built in the past three years, Zhang Qun stated that 46 kilometers of roads have been built, 101 kilometers of old streets have been repaved and improved, 37 miles of drains have been laid, 45 bridges repaired, and 16 wharves constructed, resulting in a length of 1,000 feet built. In order to meet the huge expenditure required for the construction work, the government had increased the money from \$3,130,000 to \$15,000,000 (U.S. dollar) each year for the cost of building and construction. The plans for the street system for Nantao (Nanshi) and Chapei (Zhabei) focused on ways for straightening the streets. The old streets there were not only narrow and crooked, but seriously affected traffic and retarded the commercial development of the districts. Plans have been completed for the western section of Shanghai, lying east of Chungshan (Zhongshan) Road and west of the Settlements to be connected together in a street network system.

By virtue of population, Shanghai was now the fifth largest city in the world. Population census taken of the entire city showed a total population of 3,156,151 in May 1931 with 3,096,856 Chinese residents and 59,285 foreigners. The Chinese municipality had a total

population of 1,703,574 residents, or slightly more than half the population of the entire city. Based on current population growths, the government projected that by 1940, Shanghai will have a population of between 4 million to 6 million residents. Mayor Zhang Qun's scheme for the civic center in Jiangwan included a sum of \$1 million (U.S. dollar) for the first building unit (the mayor's building and temporary structure). The total construction, including all necessary government buildings will cost approximately \$10 million. These costs will be covered by a loan issue. The period for carrying out the plan of the whole city would require about ten years. The new Jiangwan civic center will embody government buildings, residential quarters, an aerodrome, parks, and recreation grounds.

Construction of the trunk roads in the civic center began on December 1, 1931. In July 1932, construction of the administrative buildings in the civic center started. The cornerstone of these buildings was held on July 7, 1932, which marked the fifth anniversary of the establishment of the Shanghai special municipality. Future administrative buildings will be distant but convenient from the business center. Fifteen minutes of motor car would be sufficient to get from the municipal office to the business center. The construction of new municipal buildings in Jiangwan would feature designs in Chinese architecture. The structure was to be built of reinforced concrete and steel. Its exterior of Chinese style, would contain artificial stone, dark red columns, polychrome beams and brackets, and gray tile roof to enrich its charm. The administrative building, where the mayor's office would be located would have 25,000 square feet of ground space with a total floor area of 85,000 square feet. The building was designed for four stories for a height of 102 feet tall, a length of 310 feet, and a width of 80 feet.

Every possible modern convenience was added to the design of the new government buildings. Heating, sanitation, and elevators added to the modern convenience. The ground floor

was composed of an entrance hall, writing rooms, offices, safety deposit vault, a dining hall, and a kitchen. An auditorium, a library, and conference rooms were located on the second floor. The third floor contained the mayor's office, reception, and staff offices. Store rooms and servants' quarters were on the attic floor. In regards to the system of building the roads, the ring method used was to aid pedestrians in their traffic. The thoroughfares were planned to intersect at right angles. With the exception of the limitation set by the existing main roads, the blocks run east and west so the buildings faced either north or south. In the residential districts, ring streets were introduced to give a picturesque effect and reduce through traffic. The architects invited by the municipal government to design the construction were Dayu Doon, a Chinese architect educated in the United States, and three renowned foreign architects: C.E. Grunsky of San Francisco, A.E. Phillips of Washington D.C., and Hermann Jansen of Berlin. These foreign architects have all had extensive experience in the urban planning of their respective cities.

The construction of a good harbor at Woosung was another project that claimed the chief attention of the municipal authorities. Because there was no direct connection between the harbor and the railway, transportation of goods appeared to be inconvenient and uneconomical. Due to a lack of a large harbor, a lot of ships were anchored in the mid-stream of the Whangpoo or even at the mouth of the Yangtze. Small boats and lighters were used in order to carry cargo between ships and the port. There was a great lack of harbor facilities by way of meeting the demands of increased tonnage of sea-going vessels. To maintain Shanghai's position as an important port for international commerce and trade, the municipal government deemed necessary to construct a new harbor capable of accommodating the largest vessels. Woosung is located a little over 10 kilometers from Shanghai, and plans were made to link them together. The new harbor at Woosung would be able to handle every possible facility to shipping.

Along with the harbor project, the construction of a steel bridge to span the Whangpoo River became an important scheme of the Chinese authorities in order to develop the areas around the river into a prosperous industrial center. The government met with a group of prominent Chinese businessmen on November 22, 1930 to discuss the steel bridge building project. After gaining the businessmen's financial support, the construction of the bridge, set to 1,800 feet in length at a cost of about \$5 million (U.S. dollar), to be located in the Nantao section began.

The Public Utilities Bureau pushed for the creation of the Shanghai-Pootung (Pudong) ferry services, which was approved by the municipal government. Large ferry boats, created for the purposes of comfort and safety for passengers travelling between the two sides of the river were being operated on service between Shanghai and Pudong. The first steamboat was launched on November 10, 1929 and fleets of ferries followed afterwards. There was a full schedule of 12 round trips daily. The large steamers were capable of accommodating cargo and motor trucks or other vehicles. These new ferry boats were much larger than the old style steam ferries, and can accommodate more passengers. With the bodies painted in yellow and upper portions in brown, each ferry had a bridge of Chinese pagoda design and was fitted with enough lifebelts. They were well lit and have ample arrangements for air. Each could carry a passenger capacity of 20 in the special class, 120 in the first class, and 180 in the second class.

In terms of housing, the government began building tenement houses to house the poor. In the slums and shantytowns, many bamboo and straw huts were set up to house poor migrants and refugees. These huts often suffered from constant fires, and caused danger in the shantytowns of Zhabei and Nanshi. Since they were built so closely to each other, they were good places for breeding contagious diseases. In a report compiled by the Bureau of Public

Safety, there existed more than 21,000 such huts in 1928 with increases expected due to more refugee inflows. These huts could not pass sanitation standards and needed to be torn down. The municipal government raised a sum of about \$20,000 to build a block of tenement houses of Chuan Chian An Road. Plans for these buildings were prepared by the Bureau of Public Works and the land necessary was purchased through arrangements made by the Bureau of Land. Construction work was completed in 1929, and some 90 clean and well ventilated houses with a large recreation ground, an assembly hall, and an artesian well were provided for the poor. The rent for each of these houses were subsidized by the government at only about \$2 a month, which was even lower than the rent of the bamboo huts occupied by rickshaw coolies. Plans for the second block of these tenement houses were approved and construction underway. The municipal government allocated about \$100,000 and raised another \$500,000 from various charities and donations to fund the construction of 5,000 tenement houses in Chinese controlled territories. An estimated cost of \$1.3 million would be needed for this housing project with funds to be raised later. The tenement houses would be built in various locations among poor Chinese neighborhoods including 1,500 at Tan Tz Wan in Zhabei, 500 off Paoshing Road in Zhabei, 500 at Lan Nee Doo in Pudong, 300 at Shih Hui Kong in Nanshi, and 200 off Chuan Chia An Road in the western district.

The last thing on the government's agenda was the reconstruction work taken to convert the Confucian temple and its extensive grounds near the West Gate (Laoximen) into a public park. The purpose was to provide more recreation facilities for the people living in the district. A special regard was given to all the buildings of historic interest within the grounds to preserve

these buildings. The temple ground comprised an area of 82 mu (547 square km), and was remodeled to include a library and a music hall, along with outdoor space as a park.³²⁷

Municipal Finances

The two major financial institutions of the municipal government were the Finance Bureau, which managed financial affairs and drafted fiscal policy; and the Municipal Treasury, which handled funds. Taxes were collected by several bureaus including Finance, Land, health, and Public Security. By 1929, the municipal government was already facing financial difficulties due to the high costs involved in the building projects. The Jiangwan city center project was financed entirely by the issue of municipal loans.³²⁸

The municipal government had three major sources of revenue from tax collections. Direct taxes including house and land taxes, licenses such as vehicle tax, boat tax, business tax, and property tax from municipal property and services. The biggest source of revenue as the house tax, which was based on rent rates. Since rent was increasing each year in Shanghai due to demand, this allowed the government to collect more house tax. Land tax was collected in the rural areas such as Pudong, where land values were fairly low. The license taxes were collected on vehicle and boat fees. This was the second largest source of income where all vehicles on the road including rickshaws, hand-drawn carts, automobiles, trucks, buses, etc. had to pay for a current license plate. These fees had to be paid annually in order to have their license plate renewed. As more vehicles appeared on the road, revenue collected from vehicles also increased. Boat taxes were collected from merchants who owned boats along the Huangpu and Wusong rivers. Other license taxes were collected from the racetracks and from harbor fees. The third major source of revenue was from property taxes such as government owned buildings, houses,

³²⁷ Huang, Ching-shu. "Building a New Shanghai". *The China Weekly Review*, May 9, 1931, p. 363-365.

³²⁸ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.130-131.

and landmarks; government enterprises such as the ferryboat companies, the Municipal Bank; and administrative receipts from money collected for services such as processing fees, collection services, and schools.³²⁹

The Greater Shanghai Project's high annual expenditures began to become financially difficult to sustain. Government revenues and expenditures from 1927-1928 to 1931-1932 showed the increasing costs of the Jiangwan development project:

Table 6.4

Shanghai Municipal Government Revenues and Receipts (Chinese Yuan)

Source	1927-28	1928-29	1929-30	1930-31	1931-32
House tax	558,077	1,011,034	2,169,393	2,095,858	1,909,017
Property tax	22,467	184,099	510,503	590,132	421,583
Sales fees	37,368	281,881	421,252	770,740	874,305
Vehicle tax	530,519	826,248	994,627	1,118,749	1,158,230
Boat tax	81,022	146,916	214,167	335,958	348,976
Harbor fees	8,211	10,000	7,500		636,770
Municipal incomes	46,621	178,500	162,484	237,197	131,072
Administrative fees	146,750	285,251	481,330	622,001	656,872
Municipal properties	68,011	61,236	151,139		526,467
Repayment of aid funds	656,893	278,128	122,247	11,000	1,090
Business tax	1,600	8,440	7,084	26,074	131,000
Building works					165,282
Other revenues	1,251,803	1,123,620	1,011,679	904,874	1,239,910
Total	3,431,547	4,424,328	6,251,265	7,183,673	7,563,494 ³³⁰

Overall, government revenue more than doubled from 3.4 million Yuan to over 7.5 million Yuan in those five years. The biggest boost in revenue could be attributed to the

³²⁹ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.135-139.

³³⁰ *Yinhang Zhoubao* (The Bankers' Weekly). "Shi Nianlai Shanghai Shi Zhi Caizheng" (Ten Years of Municipal Finances in Shanghai). July 13, 1937, p. 6-8.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.141-142.

increases in house and vehicle taxes, which constituted the two biggest shares of revenue. The house tax typically represented a quarter of the revenues, the license fees on vehicles and boats about a fifth of the total. The land tax and transfer fees, and government properties and enterprises were the next largest sources, each contributing around 15%. However, expenditure also grew significantly during those five years.

Table 6.5

Shanghai Municipal Government Expenditures (Chinese Yuan)

Expenditure	1927-28	1928-29	1929-30	1930-31	1931-32
General administration	186,112	234,838	285,921	1,308,035	628,984
Finance Bureau	164,505	208,373	307,464	412,427	406,391
Public Security Bureau	770,687	947,656	1,326,355	1,974,918	2,241,406
Education Bureau	293,276	883,888	996,131	1,156,595	986,286
Social Affairs Bureau	104,586	140,572	194,014	261,821	332,385
Public Works Bureau	593,750	667,757	664,276	2,332,274	2,288,349
Health Bureau	159,830	182,638	239,009	259,250	325,482
Public Utilities Bureau	155,951	177,048	242,983		418,559
Land Bureau	134,067	191,223	251,386		325,765
Allocations to GMD		61,600	52,800	72,105	177,417
Debt serving			114,885	462,000	665,571
Aid funds	78,366	233,967	191,985	141,182	321,217
Retirement pensions		1,468	5,456	5,264	59,850
Harbor Affairs Bureau		26,232	66,144		
Additional expenditures	545,998	402,853	936,230		
Miscellaneous	5,000	28,923	181,353		165,282
Other	168,802	70,708	125,754	119,418	119,599
Total	3,360,830	4,396,676	6,009,003	8,503,739	9,237,411 ³³¹

The total expenditures almost tripled in five years from 3.36 million Yuan to over 9.23 million Yuan. The huge increase in costs could be attributed to rapid increases in the Public

³³¹ *Yinhang Zhoubao* (The Bankers' Weekly). "Shi Nianlai Shanghai Shi Zhi Caizheng" (Ten Years of Municipal Finances in Shanghai). July 13, 1937, p. 6-8.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.145-146.

Security Bureau and the Public Works Bureau, which were the two largest sources of costs. Other costs that increased significantly included the Education, Finance, Social Affairs, Health, and Public Utilities bureaus as well as general administration. The municipal government certainly discovered that a massive urban reconstruction project was indeed very expensive! The highest costs were in public security, which was crucial to implementing and maintaining political control over the Chinese city. The public security costs were even higher than the Jiangwan project itself.

Table 6.6

Government Revenues vs. Government Expenditures (Chinese Yuan)

-	1927-28	1928-29	1929-30	1930-31	1931-32
Total Revenues	3,431,547	4,424,328	6,251,365	7,183,673	7,563,494
Total Expenditures	3,360,830	4,396,676	6,009,003	8,505,739	9,237,411
Surplus or Deficit	70,717	27,652	242,362	-1,322,066	-1,673,917

From 1927-28 to 1929-30, there was enough money to cover the costs of the Greater Shanghai Project. However, from 1930-31 onwards, the costs of the new Jiangwan city center project caused expenditures to skyrocket. Although revenues increased significantly each year due to increase tax collections, the government's budget simply could not sustain such an expensive and large-scale building project in Jiangwan. Mayor Zhang Qun, who eagerly spearheaded the Greater Shanghai Project, faced a serious financial crisis beginning in 1930.

The Land Bureau purchased the land in Jiangwan November 1929 at prices varying from 200 to 800 Yuan per mu.³³² The initial stages had required the acquisition of 27,000 mu of land

³³² *Shanghai Shizheng Gaiyao* (A Brief Account of the Shanghai Municipal Administration). Shanghai: Shanghai Shi Zhengfu Mishuchu, 1934, Ch.8, p.10-11. Zhang, Hui. *Shanghai Shi Dijia Yanjiu* (A Study of the Land Value of Shanghai Municipality). Nanjing: Nanjing Dizheng Xueyuan, 1935, p.752-753. *China Weekly Report*, March 30, 1930, p. 166.

at a cost of 20 million Yuan. To sell off excess land to developers for profit, on July 21, 1931, the first lot of 772 mu were put up for sale. The land was divided into plots at 2,000-2,500 Yuan per mu based on their location. The Bank of China and the Bank of Shanghai purchased most of the land. A second sale in December 17, 1933 had few takers for the additional 180 to 575 mu offered. Municipal employees bought a total of 162 mu of land.³³³

The municipal government should have gained enough profit from the land sales to finance the first stages of the construction works for the new civic center. However, it had difficulty collecting the money from land sales. Those who had purchased the land did not pay up immediately because they wanted to see the administration build new infrastructure first. After continuously waiting for payments to arrive, the Finance Bureau threatened to suspend the validity of the sales to the buyers unless money would arrive to the government by a certain date or else the land would be confiscated and resold. By 1933, the government was still demanding buyers to pay up.³³⁴

Despite financial delays, the government had to keep their promises and order the initial works on building new infrastructure to take place. The Public Works Bureau began digging and laying water pipes in Jiangwan. By the end of 1930, the administrative council concluded that the first stage of the building had been completed. Major avenues and a number of secondary roads had been built. However, they were only about half as wide as planned because of the need

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.179.

³³³ Zhang, Hui. *Shanghai Shi Dijia Yanjiu* (A Study of the Land Value of Shanghai Municipality). Nanjing: Nanjing Dizheng Xueyuan, 1935, p.751. *Shanghai Shizheng Gaiyao* (A Brief Account of the Shanghai Municipal Administration). Shanghai: Shanghai Shi Zhengfu Mishuchu, 1934, Ch.8, p.12.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.179-180.

³³⁴ *Shenbao*, June 25, 1932. *Shenbao*, January 16, 1933.

Shanghai Shizheng Gaiyao (A Brief Account of the Shanghai Municipal Administration). Shanghai: Shanghai Shi Zhengfu Mishuchu, 1934, Ch.8, p.12.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.180.

to reduce costs.³³⁵ New funding was needed to finance the continuing of the Jiangwan project. Because financial resources were so limited, construction plans were delayed until the summer of 1931.³³⁶

Zhang Qun was replaced as mayor by Wu Tiecheng in January 1932. Just as Wu took over as mayor, the Sino-Japanese tensions would dramatically alter any future plans for the Greater Shanghai Project. Japanese troops had invaded and taken over the northern provinces of Manchuria in 1931, and installed a puppet government with the last emperor of the Qing dynasty being crowned emperor of Manchukuo. Simmering tensions between China and Japan had led to a series of anti-Japanese demonstrations and riots in Shanghai. On January 28, 1932, Japanese forces bombed the Chinese sections of Zhabei. The Japanese bombing permanently ruined the plans for the building of the new civic center, as the Chinese government had to respond to the fighting in the areas of Zhabei, Jiangwan, and Wusong, which was under Chinese control.³³⁷

Just as Wu Tiecheng assumed leadership, he was faced with a major crisis. Even after a cease fire was signed, Shanghai had to finance its own defense after 1932. The damages done by Japanese bombing, especially in Zhabei where the railroad station was located, caused the municipal authorities to reshuffle its priorities. Rebuilding had to be done in Zhabei, and the Jiangwan city center project faced serious financial shortfalls. There were two major factors that contributed to the municipal government's budget deficit even before the Japanese attack: working expenditure and investments. Despite careful planning, the working expenditure needed to construct a new city center exceeded the availability of funds. Expensive investments in

³³⁵ Sha, Zengshao. *Shanghai Shi Zhi Dushi Sheji Yu Tudi Liyong*. (The Use of Land and Town Planning in the Shanghai Municipality). Minguo Ershi Niandai Zhongguo Dalu Tudi Wenti Ziliao, 1977, p. 48, p.441.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.180.

³³⁶ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.180-181.

³³⁷ *Shenbao*, January 29, 1932.

building projects required a large construction labor force, raw materials, and new roads to transport supplies into the previously undeveloped and rural Jiangwan area. The relatively high salaries of many municipal staff members and the maintenance of a large police force also exceeded initial calculations for payroll costs.³³⁸ Even without the Japanese attack, the municipal government was drowning in substantial deficit beginning in 1930. The Greater Shanghai Project looked more and more like it was simply unfeasible and unrealistic to achieve.

Compounding the financial problem was that the GMD central government began to evade their financial responsibilities to the city as the GMD had other problems to deal with: most notably fighting the Communist guerrilla forces in the countryside. Without the promised financial support from the GMD, the Shanghai municipal authorities faced a daunting task of salvaging the initial goals and plans of the Greater Shanghai Project. From 1932 onward, it became apparent that despite the hard work of Mayor Wu Tiecheng, the Greater Shanghai Project was simply not going to be realized.

Manifestation of State Control

From the onset, the purpose of the Greater Shanghai Project was a direct attempt by the GMD to impose its authority over this special administrative municipality. Zheng Zuan outlined four major areas of reconstruction in which this project would allow for direct state control over the city: 1) the central core of the city, 2) the seaport and railways nearby, 3) separation of the city into different districts, and 4) the road system over the entire city.³³⁹ Each plan would focus on solidifying state power through improving and upgrading facilities and infrastructure under the banner of economic development and urban renewal.

³³⁸ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.166-167.

³³⁹ Zheng, Zuan. "Guomingdang Zhengfu "Da Shanghai Jihua" Shimo". (The Guomingdang's Greater Shanghai Project). Shanghai Shi Yanqiu, Xuelin Chuban She, 1984: p.212.

The central core of the city had to be divided into government and administrative region, commercial and business region, and civilian residential region. The government's administrative region would include each administrative office, the GMD party headquarters, the municipal legislative building, libraries, museums, and other key public infrastructure. The commercial center would be located near the Wusong port, where the railroads were. The residential area would be separated into first and second zones: the first zone would contain more forests and open areas, but the size would be smaller; while the second zone contained more housing and buildings for a more compact population with a larger geographic size.

The seaport and railways had to be modified to accommodate the growing number of passengers and increasing supply of goods arriving in the city. Repairs were made at Qiujiangkou dock, which had been badly neglected in the past. The Qiujiang dock, located near the eastern end of the center of the city was about 1,400 meters long, and had a total surface area of about 800 mu (5,336 square km). For the railroads, it was decided that the stops for passengers and for goods had to be separated for more efficiency. Passengers boarded the trains at the station located in the northeastern part of Jiangwan district at North Zhongshan Road while the station for transporting goods was located at Zhenru. By separating the two train stations, and building a separate boarding location for passengers and goods, this greatly reduced the schedule conflicts of the trains.

The city was separated into five major zones for governance and administration, industry, commercial port, business and shopping, and residential areas. The center of the city would be used for administrative functions, while the areas of Zhenru and Dachang were reserved for industrial development. The Wusong port and the train stations were assigned for commercial port transportations, while the city center and the old city would be turned into commercial

markets. Finally, Zhenru, Fanhuangdu, Fahuazhen, Longhuazhen, Caojiangjin districts became the new residential neighborhoods.³⁴⁰

“The Law of Extraterritoriality” had been designed where residents, both foreign and Chinese living in the International Settlement and French Concession were not subjected to Chinese law. This was the biggest challenge for the GMD in its quest to impose greater control over the Chinese population of the city. To get around this law, Chiang Kai-shek formed an alliance with the Green Gang, the leading underworld mobster group that controlled much of the drugs, narcotics, and prostitution trades in Shanghai. The Green Gang had assisted Chiang in crushing the labor riots of April 1927 by identifying and killing Communist sympathizers in the labor movement. Chiang and Green Gang leader Du Yusheng found their alliance to be mutually beneficial. Du’s Green Gang gained official GMD support, and thus was able to dominate the drugs and prostitution industry. Green Gang leaders made enormous profits from government protection in their criminal activities. Chiang’s GMD was able to use the Green Gang to carry out assassinations and kidnappings of suspected Communists. Since the Green Gang was a mobster organization and not affiliated with the government, they were able to penetrate various neighborhoods within the International Settlement and French Concession to identify and locate suspected Communists, or anyone else considered a threat to the GMD regime.

The Green Gang became Chiang’s personal spies in that they sent gangsters to places of public gatherings such as restaurants, bars, teahouses, department stores, shopping centers, railway and train stations, barbershops, etc. to gather information on suspected Communist activities. When suspected Communists were identified and located, the Green Gang either killed or captured them. The captured were brought to the GMD for interrogation, which resulted in

³⁴⁰ Zheng, Zuan. “Guomingdang Zhengfu “Da Shanghai Jihua” Shimo”. (The Guomingdang’s Greater Shanghai Project). Shanghai Shi Yanqiu, Xuelin Chuban She, 1984: p.213-215.

either execution or prison sentence.³⁴¹ The Green Gang gained a lot of respect from their protection by the GMD in that they could effectively eliminate their potential rival gangs in the drugs, prostitution, and racketeering businesses. With official backing from the GMD, the Green Gang controlled the streets of Shanghai, and was considered the most notorious and feared underworld mobsters in Chinese neighborhoods.

While the Green Gang served as the underground spies for the GMD, the official bureau in charge of strengthening control and order was the Bureau of Public Security. On July 22, 1927 three weeks after Shanghai special municipality was formed, the Public Security Bureau was created with the purpose of reorganizing police administration. Public Security absorbed the policemen, patrol force, and other militia. Most of the police force consisted of non-native Shanghai backgrounds, with the majority coming from the northern provinces. It was assumed that the majority of the policemen were northerners because people from the northern provinces were taller and stronger than those from the southern provinces. As a result, the GMD actively recruited tall and muscular young men from the northern provinces to join the police force in Shanghai. The Public Security Bureau made all new recruits go through a physically rigorous and demanding training regiment where they were taught discipline and obedience. This was the GMD's attempt to create a professional police force that could not only maintain order and stability, but could crush any political dissent.

In order to send a clear message to the Chinese citizens of Shanghai, the police arrested and rounded up any suspected criminals such as petty thieves, gangsters (other than the Green Gang), and anyone accused of disturbing the peace. Executions were carried out for serious crimes such as murder, rape, and robbery. Martial law was declared immediately after the worker

³⁴¹ Wakeman, Frederic. *Policing Shanghai: 1927-1937*. Berkeley and Los Angeles: University of California Press, 1995, p. 120-127, p.263-270.

riots of 1927, and was not lifted until the GMD could be assured all potential threats were arrested. Public executions for those committing the most violent crimes such as murder were used to scare off any future criminals. The GMD adopted a strict code of punishment for crimes, and made the public become very aware that anti-government activities would not be tolerated.

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A major source of tension had been between the Chinese municipal government and the International Settlement's Municipal Council over who has the sovereignty to control the extra-settlement roads that bordered the Settlement and the Chinese territories. These extra-settlement roads had been built by the British outside of the regular boundaries of the foreign concessions. With real estate property increasing in value these extra-settlement roads represented a major source of potential revenue to the Chinese. The Chinese Ratepayers Association and the Chinese Chamber of Commerce, representing the interests of Shanghai's Chinese wealthy elites urged the municipal government to not back down from "blatant imperialist expansion" and demanded the government do something about the question of "road sovereignty". On September 26, 1929, the Shanghai Land Bureau issued a decree that forbid any Chinese citizen from selling any land to the foreigners for any purpose, and threatened to confiscate the property of anyone who collaborated with foreigners. After months of negotiations, on January 16, 1930 Director General Stirling Fessenden and Commissioner of Public Works J.E. Needham agreed not to buy any more land for extra-settlement roads from the Chinese.³⁴³

The police force had placed many of their best policemen on the streets as Shanghai's roads became more dangerous during the 1920s. As motorcars increased in number, and

³⁴² Wakeman, Frederic. *Policing Shanghai: 1927-1937*. Berkeley and Los Angeles: University of California Press, 1995, p. 47-59.

³⁴³ Wakeman, Frederic. *Policing Shanghai: 1927-1937*. Berkeley and Los Angeles: University of California Press, 1995, p. 65-68.

members of the foreign elite as well as a growing number of wealthy Chinese businessmen preferred riding in automobiles, traffic congestion resulted in numerous accidents. In the month of June 1929, there were 803 recorded street accidents in the International Settlement, which resulted in 10 people getting killed and 252 injured.³⁴⁴ The Public Security Bureau sent more policemen to the particularly dangerous crossings of six major roads (Zhonghua, Minguo, Guangfu, Daton, Gonghe, and Hengfeng). These roads were cleared of stalls and peddler's stands on the sidewalk that endangered drivers and pedestrians. Much stricter regulations were enforced during the first half of 1928. Traffic violators who were involved in road impediments, speeding cars, or boats blocking river traffic were prosecuted with serious fines and license revocations to discourage others from engaging in dangerous behavior in heavy traffic.³⁴⁵

Yuan Liang, the former police chief was appointed as the Public Security Bureau director under Mayor Zhang Qun. Yuan was considered extremely loyal to the GMD, and harbored deep resentment toward the foreigners who controlled the prime real estates of Shanghai. Unable to take back the foreign territories, Yuan eagerly followed GMD orders to strengthen control to a more grassroots level in the Chinese municipality. Yuan ordered more policemen to be hired, and increased the monthly salaries of experienced police. Under Yuan's leadership, the Public Security Bureau employed a total of about 4,000 policemen throughout Shanghai. Yuan also pushed for longer and more rigorous training for new police, and demanded loyalty among his staff. Being restricted by the "Law of Extraterritoriality", Yuan assigned precinct commanders

³⁴⁴ *Shenbao*, June 26, 1929.

Wakeman, Frederic. *Policing Shanghai: 1927-1937*. Berkeley and Los Angeles: University of California Press, 1995, p.69.

³⁴⁵ Wakeman, Frederic. *Policing Shanghai: 1927-1937*. Berkeley and Los Angeles: University of California Press, 1995, p.69.

for each district, and demanded that they report back to him immediately if they experience any issues with extra-settlement roads over the question of “road sovereignty”.³⁴⁶

While the Public Security Bureau had success in reducing crime, they had difficulty in dealing with an increasing number of refugees and vagabonds that flocked to Shanghai during the late 1920s to the early 1930s. Most of the refugees and vagabonds had fled war, famine, or natural disasters in their rural villages in search of a better life in Shanghai. However, these refugees and vagabonds became a major eye-sore for the GMD as they set up shacks in shantytowns on the outskirts of the city. As these refugees could not find employment, they often resorted to begging, stealing, or other criminal activities in order to survive. Refugees often became addicted to drugs and gambling, or resorted to thievery and prostitution. Many of them became homeless panhandlers who annoyed urban residents with their begging. The Public Security Bureau sent police to arrest these beggars on charges of disturbing public order and safety. Beggars were sent to hospices or reformatory schools. Another jail was opened to house beggars in order to keep them off the streets.³⁴⁷ Despite these measures, the increasing number of refugees and beggars caused severe problems for the police force, and became a major dilemma for the municipal government as they continue to try to portray an image of the Greater Shanghai Project as a modernization campaign that will transform the city into a clean and modern metropolis.

³⁴⁶ *Shenbao*, December 10, 1930.

Wakeman, Frederic. *Policing Shanghai: 1927-1937*. Berkeley and Los Angeles: University of California Press, 1995, p.72-77.

³⁴⁷ *Shenbao*, November 6, 1930.

Wakeman, Frederic. *Policing Shanghai: 1927-1937*. Berkeley and Los Angeles: University of California Press, 1995, p.87-93.

Successes and Achievements Accomplished During the First Half of the Greater Shanghai Project

Despite numerous challenges and shortcomings from both internal and external forces, the first half of the Greater Shanghai Project from 1927-1932, on the eve of the Japanese bombing in January 28 could be considered a success. There were significant accomplishments that were very notable, especially in the construction of new roads, buildings, and other urban infrastructure; as well as in education and public health. In 1927, before the start of the Greater Shanghai Project, there were only 172 kilometers of roads in the Chinese territories.³⁴⁸ By about 1933, 54 kilometers of roads (about 40% of the previously existing figure) had been rebuilt, along with 12 kilometers of canals (about 33% of previous figure).³⁴⁹

In 1927, only one private tramway company (Huashang Dianche Gongsi) and two bus companies were in operation in Nanshi. In Zhabei, there were no public transportation facilities. The tramways in the foreign settlements were not linked to the one in Nanshi. The Public Utilities Bureau had to extend the public transportation system to the entire city by creating new routes, lines, and stops. In order to bring uniformity to the city, the Chinese officials were able to negotiate to link up three different tramway lines from Nanshi to the International Settlement. In Zhabei, an overseas Chinese person proposed to the government that he could create a bus company similar to the one he had set up in Hong Kong. This Chinese owned bus company was

³⁴⁸ Shanghai Shi Nianjian (Yearbook of Shanghai Municipality), 1935. Shanghai: Shanghai Shi Tongzhiguan, C/3. Shanghai Shi Tongji (Statistics of the Shanghai Municipality), 1933. Shanghai: Shanghai Shi Difang Xiehui, Ch.1 *Tudi* (Land), Ch. 5 *Jiaotong* (Transportation).

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 170.

³⁴⁹ *Shenbao*, January 16, 1933.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 170.

launched in 1927 with three routes, and later increased to five routes to accommodate more riders. Even after the Japanese attack on Zhabei, the bus company continued to operate.³⁵⁰

The most significant changes in the restructuring of the public transportation of city were redesigning the city's major roads and streets. In the Hunan district, new roads were paved where in the northeast: Tongyi Road, Zhaozhou Road, Waima Road, and Lima Road were connected as the north-south line. Fangbing Road and Heping Road formed the east-west line. In the center and the south, Luban Road and Tianyaoqiao Road formed the north-south line, while Kangzhai Road and Xietu Road formed the east-west line. In Zhabei district, Songgongyuan Road, Datong Road, Baoxi Road, and Baoshan Road were linked together to form the north-south line; and Zhongxin Road, Yanjiage Road, Qiujiang Road and East Qiujiang Road formed the east-west line. In Huxi district, a new road was built to connect it to the main road frequently used by foreigners. In Pudong district, where there had been few roads, new ones were paved to form the Yangsiqiu Shangnan Road to the north, Luxinqu Dongdu Road to the south, Huangpu River Road to the east, and Pudong Road to the west.³⁵¹

In the center of the city, new streets were built to link up the existing infrastructure to speed up transportation. These included North Zhongshan Road, with a distance of 13 kilometers built in May 1930, connecting Zhabei in the north and Longhuazhen in the south. Qimei Road was constructed in December 1930, with a distance of 5 kilometers to link the city center to Zhabei. Huangxin Road was built in the same month to connect it to the settlements. Sanming Road and Wuquan Road were also built at the end of 1930, with a total length of 5 kilometers

³⁵⁰ Chinese Yearbook, 1935-1935, 2:1667.

Shanghai Shi Nianjian (Yearbook of Shanghai Municipality), 1935. Shanghai: Shanghai Shi Tongzhiguan, M/23-24. Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 170-171.

³⁵¹ Zheng, Zuan. "Guomingdang Zhengfu "Da Shanghai Jihua" Shimo". (The Guomingdang's Greater Shanghai Project). Shanghai Shi Yanqiu, Xuelin Chuban She, 1984: p.216-217.

each to link them to the train stations. Pudong Road with a total length of 17.5 kilometers was the longest road constructed at the time. Initial construction began in 1930, although the road was not completed until October 1935. This road was able to link all of Pudong district.³⁵² The purpose of the construction of new roads was to allow for larger vehicles such as automobiles, buses, trams, and trolleys to be able to navigate through these streets. Some of these roads were not previously well-paved, and larger vehicles had a hard time driving through. These new roads increased the size of the lanes and made it wider for vehicles to drive and park, which led to more vehicles to appear in the Chinese sections of the city.

The Education Bureau began pushing for increased literacy among the population, and pushed for children from all socioeconomic backgrounds to attend primary schools. Many new schools were built, more teachers were hired, and a significant increase in the number of children enrolled in primary and secondary schools.

Table 6.7

Development of Municipal Public Schools

School	1927-28	1928-29	1929-30	1930-31	1931-32
Kindergarten					
Schools	2	8	9	12	13
Students		310	250	601	639
Teachers	2	8	10	24	31
Primary Schools					
Schools	47	179	179	184	186
Students	14,180	29,760	30,519	31,539	32,760
Teachers	425	960	1,035	1,066	1,147 ³⁵³

³⁵² Zheng, Zuan. "Guomingdang Zhengfu "Da Shanghai Jihua" Shimo". (The Guomingdang's Greater Shanghai Project). Shanghai Shi Yanqiu, Xuelin Chuban She, 1984: p.219-220.

³⁵³ Shanghai Shi Jiaoyu Tongji, (Statistics on Education in the Municipality of Shanghai), 1934. Shanghai: Shanghai Shi Jiaoyu Ju, p. 14-16.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.188.

The number of private schools also increased, and private schools were encouraged as long as their curriculum was approved by the Education Bureau. To reduce illiteracy, the Education Bureau paid special attention to the establishment of “people’s schools” (*minzhong xuexiao*), which provided free education, textbooks, and other study materials to the poorest neighborhoods. Children living in the poorest neighborhoods had access to attend these people’s schools for free.

Table 6.8

Development of People’s Schools

Year	Schools	Pupils
1927-28	20	354
1928-29	30	2,452
1929-30	35	2,985
1930-31	52	3,990
1931-32	54	2,426 ³⁵⁴

The Health and Hygiene Bureau was very active in promoting public health and sanitation throughout the city, especially in poor neighborhoods. The Health Bureau set up a system of compulsory vaccination for all school age children, and made students go through medical checks at the beginning of each school year.³⁵⁵ In April 1928, Health and Hygiene Bureau director Hu Hongji launched a “movement for hygiene” (*weisheng yundong*) that forced residents to remove garbage from the streets, clean the walls, and sweep the pavements of their neighborhoods. This anti-dirtiness campaign was followed by cleaning inspections of old and

³⁵⁴ Shanghai Shi Jiaoyu Tongji, (Statistics on Education in the Municipality of Shanghai), 1934. Shanghai: Shanghai Shi Jiaoyu Ju, p. 9.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.198-199.

³⁵⁵ *Shenbao*, March 19, 1928.

Shenbao, March 20, 1928.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.203.

crowded neighborhoods to make sure hygiene standards were met.³⁵⁶ A garbage collection services staff was organized to collect disposed garbage and waste from the Chinese city each day.³⁵⁷ The Health and Hygiene Bureau continued to ask the GMD for more funding to hire more garbage collectors, who director Hu felt were critical to maintaining public health and sanitation.

The Public Health Bureau pushed for more hospitals to be built; and more doctors, dentists, nurses, and other health care professionals to be trained. Many poor residents had little or no access to health care, and there were not enough hospitals or clinics to deal with so many patients. To resolve this problem, the Public Health Bureau gradually set up a series of health stations (*weisheng shiwusuo*) throughout the Chinese territories of Zhabei, Jiangwan, and Nanshi beginning in 1929. Drug abuse, particularly opium had been a major social and health problem. Under Hu Hongji's leadership, the bureau cracked down on opium smoking dens by closing them down and arresting drug dealers. Clinics were set up to treat drug users and opium smokers for rehabilitation. Given the budget limitations and the lack of health care infrastructure before 1927, the Health and Hygiene Bureau did an admirable job of improving public health and sanitation.³⁵⁸

The achievements made in public works and utilities, security, education, and health care could be attributed to the strong leadership of the bureau directors of Land, Public Works, Public Utilities, Public Security, Education, and Health & Hygiene. Shen Yi, the director of Public

³⁵⁶ *Shenbao*, April 28, 1928.

Shenbao, April 29, 1928.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.204.

³⁵⁷ *Shenbao*, July 7, 1928.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.205.

³⁵⁸ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.204-210.

Works Bureau for the entire Greater Shanghai Project served as the primary force behind the construction of new roads, better access to transportation, and improved mobility in the city. Shen's staff made thorough and detailed investigations of each Chinese neighborhood, and came up with an urban construction plan that could effectively link up or connect major roads to each other across different districts. Land Bureau director Zhu Yan was instrumental in insisting on the purchase of land in Jiangwan, which allowed for future development on a large, undeveloped piece of land. Huang Baiqiao, director of Public Utilities, worked with Shen Yi in creating and providing better urban infrastructure such as new government buildings and services in Jiangwan, the designated city center.

Yuan Liang and the Public Security Bureau used fear and intimidation tactics to reduce crimes and solidify control over the Chinese municipality. More policemen were hired and stricter laws for punishments were enforced to make people feel safer, as well as to send a clear message that crimes would not be tolerated. Chen Dezheng, Education Bureau director was credited with the establishment of more public schools, especially primary schools to improve literacy rates. Hu Hongji's health and hygiene campaign aimed at improving public health for the masses received widespread praise from both the GMD and among Chinese civilians. Many of these bureau directors such as Shen, Zhu, Huang, and Hu had worked under three different mayors from Huang Fu to Zhang Dingpan to Zhang Qun during the first five years of the Greater Shanghai Project. Their experience, knowledge, and leadership were crucial to the improvements made in urban construction and in people's standard of living during the first half of the Greater Shanghai Project.

Facing Challenges and Uncertainties

Despite the hard work of the mayors, bureau directors, and municipal staff, the Greater Shanghai Project faced severe difficulties and uncertainties when Wu Tiecheng took over mayor in January 1932. Both external and internal factors contributed to the inability of the municipal government to reach the goals set by the GMD at the beginning of the Greater Shanghai Project in 1927. As Wu assumed office in the winter of 1932, the Shanghai municipal government faced more urgent and daunting tasks than ever before to complete the second half of the Greater Shanghai Project.

From an internal standpoint, the GMD had underestimated the costs of this grand urban construction campaign by miscalculating the various sub-costs. While initially, the GMD had sufficient funding for the first two years of the project, the massive building project in Jiangwan, where a new city center consisting of administrative, industrial, commercial, and residential areas were to be constructed from scratch on a large, undeveloped, and unsettled piece of land was far too costly for the municipal authorities. Municipal finances generated from various taxes collected could not keep up with annual escalating expenses. Besides construction and rebuilding costs, the relatively high salaries offered to government employees and the rising number of civil servants such as policemen, school teachers, services professionals, etc. hired each year amounted to a rapidly increasing payroll. To make matters worse, by the early 1930s, the GMD central government reduced direct financial support to the Shanghai municipal authorities because of other critical needs the GMD faced such as building the national capital in Nanjing and military expenditures. The reduction in GMD financial support forced the Shanghai municipal authorities to depend on their own revenues to finance the GSP expenditure, which proved to be an even more enormous burden.

External forces beyond the municipal authorities' control only worsened the financial situation. Even before the Japanese bombing of Zhabei, refugees had flooded the outskirts of Shanghai. These refugees caused major housing and public health problems for the municipal officials. Unable to accommodate refugees with government housing projects, the refugees were forced to live in shantytowns. Combating public health and sanitation concerns became a major headache for the municipal government. Given the limited financial budget, public health, education, and social welfare services programs may have prevented more money being spent on the city center construction in Jiangwan. The anti-Japanese sentiments over Japanese military aggression, and the GMD's inability to resist the Japanese following the attack on Shanghai forced the GMD to rethink their priorities. The Japanese bombing left much of Zhabei destroyed, and the rebuilding of Zhabei put additional financial strains on the over-stretched municipal government. Mayor Wu Tiecheng did his best to try to continue the Greater Shanghai Project, but faced with overwhelming difficulties caused by both internal and external factors, it was obvious when he assumed the leadership of the city in January 1932, that the original goals of the Greater Shanghai Project would not be able to be fulfilled as planned.

Chapter 7

The Greater Shanghai Project- Part II (1932-1937): Unfulfilled Expectations

Mayor Wu Tiecheng's government faced a serious crisis as the Japanese launched an aerial bombing assault on the Chinese controlled Zhabei in January 1932. The second half of the Greater Shanghai Project faced major challenges from both financial and political standpoints. While Wu and his municipal government did their best to try to carry on the initial plans of the Greater Shanghai Project, it was clear that those goals could not be reached. This chapter examines the second half of the Greater Shanghai Project from 1932-1937, and analyzes the reasons behind the unfulfilled expectations of the campaign. The questions addressed include whether the Japanese attack and subsequent invasion that triggered the Sino-Japanese War was the primary factor in the demise of the Greater Shanghai Project, or were financial limitations and the lack of public revenue for the funding of large scale public works the main reasons for the downfall of the project? While the Greater Shanghai Project did not achieve the ambitious goals that the GMD had envisioned, can this campaign be considered a failure? Why was the legacy of the Greater Shanghai Project? Was it an overambitious plan that achieved partial rather than full success or was it an embarrassing modernization campaign that revealed the weaknesses in the financial resources and political leadership of the GMD? Who should have been more responsible for the disappointing conclusion of the project: the GMD or the Shanghai municipal government?

The second half of the Greater Shanghai Project was defined by the leadership of Wu Tiecheng as mayor. Unlike the tumultuous first five years as a special administrative municipality where three different mayors led the Chinese city, and where attrition and turnover of key municipal staff were high; Wu Tiecheng and his bureau directors brought about a sense of stability to the city. Wu served as mayor from January 1932 to April 1937; and under his tenure his key advisors were all his trusted protégés who pledged their loyalty to his leadership.

Compared to the first half of the special administrative municipality, Wu's government was quite effective in dealing with the bureaucracy of the GMD political hierarchy in Nanjing.

1.28: The Japanese Attack

Tensions with Japan were apparent in January 1932 where the threat of Japanese military expansionism in Asia brought about anti-Japanese sentiments in China. On January 18, 1932, a group of young Chinese fought with a group of Japanese monks, causing the death of one of them. Two days on later, a group of Japanese residents burned down a textile factory where they claimed the monks' assailants were from.³⁵⁹ Those incidents triggered a serious of explosive confrontations between the growing number of the Japanese community living in Shanghai and the Chinese. The Japanese consul general demanded severe reparations from Wu Tiecheng, punishments for the guilty party, and a public personal apology from the mayor with the promise that all anti-Japanese activities would be banned. On the afternoon of January 28, 1932, Wu informed the Japanese consul general that his government would accept the Japanese demands. The consul general was satisfied with the conditions but the Japanese military was not ready to accept just an apology. High ranking Japanese military officials demanded an armed intervention in Shanghai under the disguised name of protecting Japanese citizens. However, the real intentions of the Japanese army was to take over a part of Shanghai and to carve out a Japanese concession area just like the British and French had done in the mid-19th century.³⁶⁰

The Japanese had believed that their strong military capabilities would be able to overwhelm any opposition in Asia, and their imperialistic ambitions had set their sights on conquest and colonization of their Asian neighbors, just like the Europeans have done. The anti-

³⁵⁹ *Shenbao*, January 21, 1932.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.83.

³⁶⁰ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.83-86.

Japanese riots and the insecurity of Japanese residents in Shanghai gave the Japanese military the perfect excuse to attack and take over a part of Shanghai. Without warning on the evening of January 28, the Japanese troops attack the Chinese section of Zhabei. The Japanese military claimed that troops entered Zhabei to ensure the safety and protection of Japanese citizens from the Chinese mobs. The Chinese 19th Army, in defense of Zhabei put up a fierce resistance but was quickly overwhelmed by the superior weapons of the Japanese forces. Fighting was initially limited to Zhabei but quickly spread to the rest of Chinese controlled Shanghai, including Jiangwan and Wusong. The Japanese called in their air force for the aerial bombardment of Zhabei, which had been where much of the Chinese troops had been stationed. Chinese civilians were specifically targeted to punish them for inciting anti-Japanese riots.

Wu's government had to deal with this emergency crisis by forming refugee aid organizations for the civilians displaced or left homeless by the Japanese bombing. Wu attempted to put the city's financial and human resources to good use by asking Shanghai's wealthy elites to form an association for maintaining business activities in the city and to collect aid funds. Wu appealed to the elites' social association to create temporary assistance to refugees in the war zones.³⁶¹

Wu's vigorous leadership in the face of combat and his successful appeals to the city's wealthy elites allowed the municipal government to provide substantial aid to the war victims. The authorities set up thousands of beds in the city's hospitals to treat wounded Chinese soldiers and civilians. The Social Affairs Bureau distributed food and supplies to the refugees and homeless. The Public Security Bureau attempted to restore order by organizing fire-fighting

³⁶¹ *Shenbao*, February 1, 1932.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.86-89.

services to put down the raging fires in Zhabei. The municipal government's quick responses prevented further chaos from happening in the city.

The Japanese did not attack the International Settlement but as soon as emergency was declared, the International Settlement closed all entry into their borders to avoid being overwhelmed by a flood of refugees from Zhabei. Instead makeshift camps were set up throughout the city to provide food and shelter to the refugees. The Social Affairs Bureau responded the best it could to the emergency relief. The bureau took over responsibilities such as the collecting and distribution of clothing, blankets, kitchen utensils, and other items. Statistics were compiled on population movements, the location of makeshift camps, and the distribution of food and medicine. Each camp was provided with a care center with a nurse to provide basic health services such as vaccinations against diseases. This huge humanitarian effort was met with assistance from active social organizations in Shanghai such as chambers of commerce, guilds, native-place associations and foreign organizations such as the Red Cross that helped provide emergency relief to the municipal government.³⁶²

Finally on March 5, 1932, a cease fire was agreed where the Japanese demanded Chinese troops withdraw from Shanghai. This agreement was deeply humiliating to the Chinese, particularly to the GMD. The most humiliating clause in the cease fire agreement was one stipulating the Chinese government could not station troops inside Shanghai or within a radius of 30 kilometers. Even after the humiliating agreement was signed in May, the municipal government faced a considerable task of reconstruction. Wu Tiecheng's administration had to resume control over the city and rebuilt the damages caused by the Japanese attacks. In Zhabei, the Public Security Bureau set up a special office to provide for the protection of its inhabitants

³⁶² Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.89-91.

and to prevent further conflicts with the Japanese. The Japanese troops did not leave until July.

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Wu Tiecheng's Municipal Government (1932-1937)

When Wu Tiecheng was appointed mayor, he installed a new set of municipal leadership based on his familiarity with their loyalty.

Mayor Wu Tiecheng's Administration (January 1932-April 1937)

<u>Bureau</u>	<u>Director</u>
Social Affairs	Mai Chaoshu
	Wu Xingya
	Pan Gongzhan
Education	Pan Gongzhan
Finance	Cai Zengji
Hygiene	Li Tingan
Peacekeeping	Yang Hu
General Secretariat	Yu Hongjun
Public Security	Wen Yingxing
	Wen Hongen
	Cai Jingjun
Land	Jin Liren
Public Works	Shen Yi
Public Utilities	Xu Peihuang ³⁶⁴

Wu created the new Bureau of Peacekeeping in the aftermath of the Japanese attack to restore order and prevent further tensions with the Japanese. Pan Gongzhan and Shen Yi were maintained from the previous mayoral administrations, although Pan was moved from Social Affairs to Education. Shen Yi's talents were widely recognized and his skills praised by everyone in the municipal government. Wu needed Shen's expertise on Public Works in order to continue the Greater Shanghai Project's development plans.

³⁶³ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.91-94.

³⁶⁴ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.110.

Wu's new appointments were primarily based on native-place or provincial loyalty. Wu himself was a native of Guangdong province. His municipal staff clearly showed his preference for his fellow Guangdong protégés, whom he could be assured of their loyalty and obedience to his commands.

<u>Official</u>	<u>Home Province</u>
Wu Tiecheng (Mayor)	Guangdong
Yu Hongjun	Guangdong
Cai Zengji	Guangdong
Wen Yingxiang	Guangdong
Wen Hongen	Guangdong
Cai Jingjun	Guangdong
Li Tingan	Guangdong
Pan Gongzhan	Zhejiang
Shen Yi	Zhejiang
Wu Xingya	Hubei
Jin Liren	Anhui
Yang Hu	Anhui ³⁶⁵

Wu's bureau directors came primarily from his home province of Guangdong in south China. Previously, Huang Fu, Zhang Qun, and Zhang Dingpan's bureau directors were primarily from neighboring Zhejiang or Jiangsu provinces. Native-place associations (*tongxiang*) had been in place in Shanghai since the mid 19th century, as people from the same hometown or province formed networks and alliances to assist each other with jobs, connections, and inside information in the city.³⁶⁶ Native-place loyalty was clearly what Wu Tiecheng wanted to form his key leadership circle. His loyal followers would publicly support his policies and decisions regardless of the outcomes.

The reconstruction of Zhabei and Wusong was the first crucial test to Wu's administration. Wu had ordered the Social Affairs Bureau, the General Chamber of Commerce,

³⁶⁵ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.108.

³⁶⁶ Goodman, Bryna. *Native Place, City, and Nation: Regional Networks and Identities in Shanghai, 1853-1937*. Berkeley and Los Angeles: University of California Press, 1995.

and the Association of Chartered Accountants to collect as much information as possible on the human and material damages caused by the fighting. A municipal report estimated the total amount of damages caused to the city to be about 1.5 billion Chinese Yuan. An estimated 800,000 people were affected by the attack, with 6,000 killed, 2,000 wounded, and 10,000 missing among Chinese civilians. Furthermore, more than 12,000 buildings, 4,000 shops, 240 schools, and 600 factories had been destroyed by the Japanese bombings. Zhabei and Wusong had suffered severe destruction that resulted in a large number of government infrastructure, including newly built buildings being destroyed.³⁶⁷

Wu ordered his bureaus to get down to business immediately with the reconstruction plans. The Public Works Bureau led by Shen Yi organized workers to clear the roads, demolish the fortifications, fill the trenches, and rebuilt the bridges. The Public Utilities Bureau installed more than 2,000 street lamps. Municipal officials were assigned to the areas that had suffered the most damages, and fire hydrants and electric lines were repaired immediately.³⁶⁸ The Health Bureau was able to organize large scale operations of disinfection in the badly damaged areas of Zhabei to bury dead corpses and prevent epidemic diseases from spreading. Roads were disinfected with lime to prevent contamination and mobile health care centers provided active vaccination campaigns for the sick.³⁶⁹

After the fighting, the municipal government faced financial problems. The fiscal budget had been worsened by the loss of 70 percent of land tax from the rural areas of the municipality

³⁶⁷ *Yinhang Zhoubao* (The Bankers' Weekly), June 14, 1932.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p. 94-95.

³⁶⁸ *Shenbao*, May 13, 1932.

Shenbao, June 26, 1932.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993:p.95.

³⁶⁹ *The China Weekly Review*, June 25, 1932.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993:p. 95.

because of flooding on the Yangzi River. Receipts had fallen to only around one sixth of the prewar revenues, while the municipal budget faced a deficit of 3 million Yuan.³⁷⁰ The municipal government could not rely just on emergency measures but it had to plan for the future and prepare a long term project for reconstruction and development to the destroyed districts.

A committee was set up for the reconstruction of the Shanghai-Wusong war zones. Committee members comprised of both bureau directors as well as wealthy and prominent Shanghai financiers.³⁷¹ Wu Tiecheng knew that he needed the support of the local elites for the reconstruction of the city because without their financial support, large scale projects would not be financially possible. The Social Affairs Bureau came up with a three year reconstruction plan, assessed at 5 million Yuan. The agenda in this plan included swift construction of new homes, the rehabilitation of rural zones, and the financing of social assistance through people's credit institutions. The Public Works Bureau was assigned to continue the extension of the Greater Shanghai plan in Jiangwan implemented before the start of the attack. Provisions included the construction of roads and railways connecting the planned civic center in Jiangwan to Zhabei, the shifting of the northern station out of the city because it hampered the expansion of the district, and the installation of new wharves near Wusong.³⁷² The municipal government had hoped the extension of this project would lead to the development of a civic center that would

³⁷⁰ *Shenbao*, May 13, 1932.

Shenbao, June 26, 1932.

Shenbao, November 14, 1932.

The China Weekly Review, August 27, 1932.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993:p. 97.

³⁷¹ *Shenbao*, May 24, 1932.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993:p. 97-98.

³⁷² *Yinhang Zhoubao* (The Bankers' Weekly), October 25, 1932.

The China Weekly Review, June 18, 1932.

The China Weekly Review, July 2, 1932.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993:p.98.

benefit Zhabei and other devastated areas by encouraging more business activities and attracting a larger population. The municipal authorities had given up the rebuilding of Zhabei through government expenses because of the budget deficits, and had hoped private sectors could assume the responsibility for it. Wu's government felt the money for rebuilding Zhabei would be better spent on a more ambitious project to transform the city in Jiangwan.³⁷³

Wu realized that in the aftermath of the Japanese attack, his government needed to win over the people. To reduce the financial burden on the population, the municipal government decided to reduce taxes in areas that had been directly affected. Taxes were also lowered in other areas under Chinese control. In the official news report on June 21, 1932, the house tax was canceled for the first six months of the year. The payment of vehicle tax was postponed to June. All other taxes such as ships, markets, etc., were to be paid when activities resumed. A generous reduction in land tax in the rural outskirts of the city was also granted.³⁷⁴ While Wu's tax reduction policy was a wise move, it significantly reduced the amount of public revenues available for the 1932 fiscal year. It was likely that the inhabitants of the city, especially those who had their homes and property destroyed by the Japanese attack would have been unable to pay any taxes. Wu's gestures showed that he was a caring and compassionate mayor who could relate to the people. But the financial deficits associated from both the high costs of reconstruction and the loss of tax revenue would put the municipal government in even more dire financial constraints.

³⁷³ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993:p.98.

³⁷⁴ *Shenbao*, June 24, 1932.

Shenbao, February 4, 1933.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993:p.99.

Keeping the Greater Shanghai Project Going

Wu knew that if he wanted to gain the support of the GMD central government in Nanjing, he needed to carry out the original plans of the Greater Shanghai Project to completion. Despite the financial difficulties that lay ahead, Wu ordered his staff to press forward. Public health and sanitation had been a key agenda in the urban development of a modern city. On October 1, 1932, the municipal council approved the resolution of a meeting held on September 14 to adopt the recommendation made by the Public Works Committee that all unauthorized huts should be demolished after one month's notice. These unauthorized huts that had appeared in the shantytowns had been an embarrassment for the municipal government. The occupants were usually beggars or the homeless. In reports submitted to the Works Committee on September 6, the acting commissioner of public works emphasized that squatter huts should not be permitted. There was an estimated 1,000 unauthorized huts that had been erected that needed to be demolished. This resolution was supported by the commissioner of public health who stated that there was no doubt that the existence of this large number of unauthorized structures was subversive to the interests of public health, and that they helped spread infectious and contagious diseases. Immediately after the council approved the resolution, demolition teams moved to demolish these squatter huts.³⁷⁵

An announcement was made on November 26, 1932 that the construction of roads and a new administrative building of the city government of Greater Shanghai in the proposed civic center between Jiangwan, Yangtszepoo, and the northern district of the International Settlement was expected to be completed by the end of June 1933 so that the city government could move to its new office by July 1933. This news greatly delighted Wu Tiecheng. The report indicated that more than 2,000 laborers were engaged in the building work in the civic center, which covered

³⁷⁵ *The China Weekly Review*, October 1, 193, p. 203.

about 1,000 acres. Some of the principal thoroughfares in the section had already been completed. At the northwest section of the civic center, a large municipal cemetery was being laid out. A magnificent building to be used as the “main hall” of the cemetery had been constructed. A park occupying an area of over four hundred mow and with recreation ground was also being laid out to the north of Chen Tung Road and the south of Wu Chuang Road, while the building of six bridges, all of reinforced concrete, will start in December 1932 over Jukong Creek, which passed through the civic center.³⁷⁶

On October 10, 1933, the new municipal building was dedicated with great pomp and circumstance. The new building where the Greater Shanghai municipal administration relocated to at the civic center in Jiangwan was officially dedicated on the occasion of the 22nd anniversary of the founding of the Republic of China. Mayor Wu Tiecheng officiated at the inauguration ceremony and the event was attended by upwards of 20,000 people. The ceremony was initiated at 10 o'clock in the morning with music played by the Public Safety Bureau band and the raising of the national and GMD party colors, followed by fireworks and airplanes encircling the building from above. Mayor Wu performed the ceremony of opening the main doors to the building and the unveiling of the memorial tablet to Sun Yat-sen, followed by GMD rites. Wu delivered the inaugural address where he outlined the scheme of construction for the Greater Shanghai Municipality. The Shanghai Peace Preservation Corps, the police force, and fire brigades paraded in file before the mayor and other senior officials.

The new municipal structure was built after the pattern of the former imperial palaces and its exterior is typical Chinese in architectural design, from the great sweep of the grand stairway leading to the main doors to the beautifully carved and colored upper walls and tiled and up-curving roof. Inside the building, Chinese decoration was combined with Western utility. In the

³⁷⁶ *The China Weekly Review*, November 26, 1932, p. 562.

center of the main hall, the memorial tablet to Sun Yat-sen was placed. From a distance, the new municipal building presented a gorgeous appearance and its vivid color combinations made it stand out in the center of open green fields of Jiangwan, as yet occupied. The new structure was four story in height. On the two sides of the administration building, two plain new buildings had also been completed, which housed the various bureaus of the Greater Shanghai Municipality.

Wu Tiecheng made sure he paid tributes to the cooperation and assistance of local Chinese leaders and foreign leaders in restoring peace and order in Shanghai after the Japanese attack, which enabled the resumption of construction work on the new municipal building. He reminded the attendants of the painful experiences of the past year, mindful of his heavy responsibilities in the planned rehabilitation of war-devastated areas. He explained the origin of the new building, saying the development of a Greater Shanghai had been effected by the program of national reconstruction laid down by Sun Yat-sen. The creation of the civic center would be the first step towards the realization of the plans for the establishment of a Greater Shanghai. He thanked the previous three mayors: Huang Fu, Zhang Dingpan, and Zhang Qun for their services and contributions leading up to the present stage. Wu emphasized that in the comprehensive plans for the development of Greater Shanghai, the new structures could only be regarded as a modest beginning. Bordered as it by Wusong to the north, the foreign settlements to the south, the Huangpu River in the west; the new city of Jiangwan occupied an excellent central location and has great future in store for it. Wu appealed to the people of Greater Shanghai for continued faith and cooperation, where he promised that the planned program of reconstruction “in making Greater Shanghai the preeminent city that man and nature have destined it to be.”

The dedication of the ceremony was the highlight of Wu's mayoral tenure. The ceremony was attended by not a large number of Chinese officials and business leaders, but also by a representative gathering of foreigners. Practically all foreign consulates in Shanghai were represented as well as a large attendance of foreign naval and military officers.³⁷⁷

As population continued to expand, affordable housing had become a major concern for the majority of residents. An editorial appeared in *The China Weekly Review* suggested that the government should do more to make rent more affordable. The article stated that the rent problem in Shanghai concerned nearly every resident in the community and needed an amicable solution. While the amount paid for a house in Shanghai in terms of gold (gold currency) was rather low compared to that paid in other metropolises of the West, the economic conditions in China made rent extremely high and unaffordable for a great number of people. Rents were extremely high, particularly in downtown areas convenient for public transport. Immediately after the Japanese attack, thousands of business establishments located in or near the war zone faced bankruptcy, due to the suspension of trade. During the Japanese hostilities, more than nine thousand houses in Zhabei and the Hongkou districts were destroyed, and as a result the demand for housing had become more urgent than ever before. Many landlords whose houses were not destroyed had raised the rent as high as 100% compared to that of 1932 before the attack. Mainly due to economic depression, many of these houses have not been fully occupied, but the landlords perhaps waiting for business revival are unwilling to let rent to their houses be lowered.

Tenants had faced the difficult situation of not being able to afford to pay their rents. An estimated 5,000 mercantile houses all over Shanghai have not paid rent for several years, or are behind on their monthly payments. In normal times, they would have been ordered to close by

³⁷⁷ *The China Weekly Review*, October 14, 1933, p. 800.

the court, but because of the economic depression, the government has withheld from closing down these stores late on payments. An estimated seventy business establishments located along Nanking Road, the most prosperous business section in Shanghai may close their doors baring unforeseen forces. In the face of acute economic depression, combined with an unusually low index number of commodity prices, the people of Shanghai have to pay a higher rent than in the past. While it was true many landlords bought land at a peak price and constructed premises during the past years where building materials and wages were high, the editorial considered the high rent to be unjust and unreasonable. The articles suggested the government should step in and resolve this problem before tensions between landlords and tenants break out. In conclusion, the editorial asked the initiative to come from the government to work out a practical plan between the landlords, tenants, labor unions, and chambers of commerce to solve this housing problem so that social order and stability could be maintained.³⁷⁸

Wu knew his administration had to focus on the housing problems facing in the city. On August 10, 1935, the municipal government laid out plans for the housing situation in Shanghai by addressing these concerns. The major issue had been rural migrant who have flocked to the city. Framers in the interior of the country had continuously moved in droves to Shanghai in search of a better life. They have become the unskilled laborers such as rickshaw pullers, wharf coolies, etc. that have fueled Shanghai's growth. They lived in grass huts numbering about 30,000 scattered all over Shanghai. A survey by the city government found that that the number of dwellers in these huts to be 94,222, or 3.1 percent of the total population of about three million living in Shanghai. They live in these huts under the most unsanitary conditions. Wu Tiecheng understood the importance of resolving the housing problem and organized the Labor Welfare Commission of Greater Shanghai to specifically focus on housing for the poor.

³⁷⁸ *The China Weekly Review*, March 17, 1934, p. 106-107.

The Labor Commission, chaired by Wu himself, consisted of General Secretary Y.L. Lee and all the commissioners of the city government along with about twenty foreign leading experts as members. The government set aside about 1.5 million (U.S. dollars) for the commission to carry out its projects. Since the organization of this commission, there were three sub-committees: one for building and planning, one for training social workers, and one for the rickshaw administration. The immediate projects the commission worked on were the construction of six or more model villages to meet the needs of the poor, the training of social workers, and to aid rickshaw pullers. To reduce the suffering of hut dwellers, steps were taken to build workers' villages. Six or more model villages were planned to be built to house migrant laborers with one at Chi Mei Road, one at Chungshan Road, one at Tai Mo Bridge, and one at Po Sin Road. Beside these villages, the commission planned to build two or three villages for rickshaw pullers, which had been advocated by the rickshaw administration.

Each model village consisted of between two and three hundred houses, grouped together with five or six houses in each row. Each house had a living room, kitchen, toilet, and up stair sleeping accommodation. All these houses were built to be fireproof and waterproof. Since many migrants were single, the plans also include two large dormitories: one for single men and the other for single women. Each village contained a large playground for children as well as a school building, a cooperative store, a tea house, a nursery, public toilets and bath houses. Dayu Doon, the architect in charge of the civic center and the Bureau of Public Works were assigned to handle the construction.

The commission selected about forty students for a training program of approximately five months. After training they were to be assigned for welfare work among these new villages. The teachers for this training program were high school graduates, with some even being college

graduates. The Chinese YMCA cooperated with the commission to let welfare and teacher training programs use their facilities. The rickshaw administration planned to introduce better quality rickshaws into Shanghai to uplift the pullers. Two or three villages were built to house these pullers and the welfare work for them would be centralized within these villages. The commission set aside about \$500,000 out of \$1.5 million for the rickshaw administration and the welfare work of the pullers.³⁷⁹

In December 1935, Dayu Doon, architect-in-chief in charge of the new city center project in Jiangwan published an account of the progress made in the Greater Shanghai Project in *The China Quarterly* magazine. Doon praised the leadership of Mayor Wu and his own teams for the visionary schemes for the development of a new Shanghai. Doon reported that only a few years after announcements were made, a new city was arising from the open fields of Jiangwan. The area now known as the civic center had been nothing but a great expanse of flat low land for farming. By 1935, visitors could immediately notice the carefully laid out, spacious, and well-paved roads. In Jiangwan, construction work was on going for an athletic stadium, gymnasium, and swimming pool. The mayor's building and the gate towers of the museum and library was a short distance away. There were many public and semi-public building such as a up-to-date hospital. Construction of the Jukong Wharves would relieve the congestion at the old waterfront, two aerodromes: one for military and one for commercial use, had been enlarged and improved. Four model villages for the poor had been completed to improve the living conditions among the poor, health stations had been erected at different parts of the city so more people could have access to health care. A primary school and two high schools: one for boys and one for girls were scheduled to be completed in early 1936. Doon emphasized that all these projects were carried under stringent financial conditions.

³⁷⁹ *The China Weekly Review*, August 10, 1935, p. 866.

Doon continued by addressing future plans beside increasing efficiency and preserving health. Public appearances were crucial for a modern metropolis, and Shanghai needed to appeal to the eyes of visitors. Roads, gardens, and open public spaces should be ample without being wasteful; public buildings should be imposing without being extravagant; houses should be artistic without being gaudy. The new schemes would support the Greater Shanghai Project to even higher expectations. The main roads in Jiangwan were planned to link up with the principal roads of the old areas in order to afford facilities with an outlet of traffic congestion. The foundation stone was laid for the mayor's building by Mayor Zhang Qun on July 7, 1931 on the fourth anniversary of the founding of the Shanghai special municipality. The mayor's building, modeled after the city hall of many Western cities became the hallmark of the Jiangwan new city center project.

The mayor's building; one of nine proposed buildings to house the city government's offices was completed in 1933. The building was built rectangular in shape with the central portion slightly larger. It measured 310 feet long and 100 feet wide in the middle. It has four floors, with the top floor being the space under the middle. The total floor area is over 90,000 square feet. The exterior is an adaptation of the traditional Peking palace style with a balustrade base, vermillion columns, highly decorated beams and eaves, and the whole covered by a glazed tile roof in green. The ridges and decorations consisted of yellow tile. The ridge at the central portion is higher than the two wings, where the highest point measures 100 feet from the ground. The exterior wall is of artificial granite with parts delicately carved. Certain modifications were made to meet requirements of modern planning and construction. The interiors of the principal halls consisted of massive cylindrical pillars and highly decorated beams and ceilings to give an impression of dignity and elegance. The building has proper heating and ventilation, and is

equipped with two elevators. An important feature is the grand stairway leading from the ground to the massive bronze doors of the auditorium on the second floor. The distinction of the structure is not its sheer size or the use of expensive materials but by the creation of a new style which contained the best features of Chinese architecture and modern design.

Temporary buildings for the bureaus: flanking the rear of the mayor's building are two smaller buildings to use the Bureaus of Public Works, Land, Education, Health, and Social Affairs. These buildings are two storied structures, each built around a large court yard in the middle. Each bureau has its independent entrance. These temporary buildings, completed in 1933, were occupied by the various bureaus until the completion of the city government group.

The staff's dormitories: a group of five buildings with sweeping Chinese roofs and decorated eaves located at the south bank of Jukong Creek to the southeast of the mayor's building served as dormitories for municipal staff. These buildings provided lodging for several hundred municipal staff members. There are single room, double room, and room with kitchen accommodations. In the central building, there are public dining halls, reception and recreation rooms, offices, etc. These buildings are located within walking distance from the municipal buildings.

The police station: a gray two storied building a short distance from the civic center served as the sub-station of the Bureau of Public Safety. This building is situated at a strategic point as it became the converging point of the three main roads leading from the International Settlement. The building was designed for further extension and for the inclusion of a future fire station.

The primary school: the school building consisted of reinforced concrete marked horizontally by rows of continuous steel windows. The middle portion is three storied and the

wings step down from two to one story. The school can accommodate 200 children of municipal staff under the supervision of the Bureau of Education.

Wireless station: a wireless station was completed by the Bureau of Public Utilities. Situated directly north of the mayor's building, this station can send daily broadcasts.

The city library: the library is located in the civic center, south of the mayor's building, and directly opposite of the city museum occupying a building area of 18,000 square feet. The library has a total floor area of 33,000 feet. It is a two story reinforced structure with a gate tower over the central portion of the front façade. The ground floor contains an entrance hall, periodical room, offices of administration at the left, and a lecture hall at the right. The upper floor is devoted entirely to reading. A stock room is attached to the rear end of the building with enough height to accommodate five floors of shelves totaling 50,000 linear feet, or approximately 400,000 volumes of books. Over the main entrance is an exhibition hall. The architecture was a combination of modern and Chinese designs. The gate tower, covered with yellow glazed tiles and elaborately decorated under the eaves can be considered the traditional Chinese style. The tower, enclosed by a terrace decorated with Chinese balustrade granite and exterior walls made of artificial stone. The entrance hall, main delivery room, and the exhibition hall were richly decorated with conventional Chinese polychrome design with vermilion columns. Doon stated that the new library will be open for use on January 1, 1936.

The city museum: the museum, located directly opposite of the library occupied an area of about 16,000 square feet. The total floor area consisted of 34,000 square feet. The building was designed to have an entrance hall, offices of administration, a library, a lecture hall, and exhibition halls of various sizes and shapes. Only the main portion of the building has two stories, with the rest being one storied. Located directly from the entrance hall, the main

exhibition hall with two stories and covered with a glass room provided a great view of the immediately surroundings. The exterior and interior of the museum were similar to that of the library. Adequate ventilation was provided, and a system of air-conditioning ducts was installed to provide warm air in winter and cool air in summer.

The city hospital group: the hospital group included two medical units, two surgical units, one for gynecology and obstetrics, one for pediatrics, one for out-patients, and one for nurses. The hospitals were to be dedicated and open to the public on January 1, 1936. The first unit served as a general hospital, where the main administration and medical school buildings were placed. The “fan-shaped” grouping of the buildings allowed for maximum amount of air and sunshine to all sides of the radiating buildings. The main entrance located on the north side of a lot comprising of 80 mow, was bounded by the Jukong Creek on the south sides and main streets on the other three sides. All wards were contained in the six radiating units. Each ward unit had its longer sides facing approximately east and west, with the south side reserved for day rooms. The resulting trapezoid-shaped areas between the buildings were made into gardens where convalescent patients could walk or be wheeled around. The services quarters were located at the southwest corner of the lot. As the prevailing wind travel from southeast to northwest, the smoke nuisance could be eliminated. The residential quarters were located at the southeast corner near the river.

The first hospital unit: the building formed the first and central unit of the hospital group. This building measured 264 feet long and 52 feet wide, occupied an area of 11,400 square feet with a floor area of 48,600 square feet. The central portion had five floors and two wings, equipped with two large elevators. The building could accommodate from 150-200 beds. The exterior walls of the building were built with granite and artificial stone. The exterior conformed

in character with the number of other buildings built by the city government at the civic center. The materials used were in line with those used in the best hospitals in the world. The building was planned with the least waste of space and provided adequate space for all essential functions. It was heated with the Durham Differential System, a new application of the engineering principle, which assured economical and comfortable heating.

The pathological research laboratory: the laboratory was similar in its appearance to the hospital but smaller in size. It measured 134 feet by 50 feet with a total floor area of 20,000 square feet with four stories high. The building was equipped with gas, compressed air, vacuum, direct and alternating current, high voltage, high pressure steam, and electrically operated refrigerators. Three separate buildings, especially well-ventilated were provided for the care of animals used in experiments.

The city stadium: the stadium was built with a seating capacity for 60,000 persons required for national or international athletic events. There were 50,000 permanent seats with space for additional 20,000 if necessary. The total capacity of the stadium, depending on the event could be set at 70,000. The structure of the stadium was designed primarily for track and field events. The center of the stadium was the football field, with tennis and basketball courts at the end. The oval track measured 500 meters with a 200 meter straight track on each long side. In most cases, maximum standard dimensions were adopted. The tracks were covered with cinder and the rest of the area covered with turf. The oval-shaped plan was selected instead of the U-shaped or the bowl plan, because track events required two 200 meter straight tracks; making it necessary to have straight sides. The public stadium where thousands of spectators enter and leave built two lines of circulation-horizontal and vertical. One horizontal line was designed for tickets to be taken. In case of traffic congestion, a thirty feet driveway was added to the

circulation. There were two grand-stands, one opposite the other. Below the grand-stands was space for shops, public toilets, ticket booths, etc. The structure was made of reinforced concrete throughout. The decision to use red brick with artificial stone for base and copings for exterior wall was reached after careful study of the cost and durability of relative materials. The model was designed after many American and European stadiums, which used the same materials. The main feature of the stadium centered on the main entrance, which was made of entirely pre-cast artificial stone with Chinese architectural motifs.

The city gymnasium: along with the stadium, the indoor gymnasium formed the sports center of Greater Shanghai. The purpose of the building the gymnasium was not only to hold various indoor sports but also to provide a large assembly hall for the people of Shanghai. The large floor space could be used for exhibitions and displays. The permanent seating capacity was 3,500 with 1,500 temporary seats. The main floor measured 131 feet by 76 feet, which was large enough to accommodate three ordinary basketball courts laid out side by side. The highest point of the ceiling was 63 feet from the main floor. The overall length of the building was 270 feet, while its overall width was 150 feet. The balconies were supported by heavy concrete beams on brick walls. There were 13 rows of decks, each measuring 26 inches wide and 14-16 inches high. The main façade of the building suggested a combination of modern form and Chinese style. Three richly carved arched portals form the main entrance to the building. The remaining three sides of building were of red brick trimmed with artificial stone at the top and bottom. The construction was made of structural steel and reinforced concrete. Wood was used only for the main floor and all doors. The building had enclosed walls of brick with pre-cast artificial stone coping and base.

The city swimming pool: the third of the group of structures completed at the sports center complex was the swimming pool. The open air pool surrounded on four sides by concrete stands could seat 4,000 persons. Collaboration with local athletic authorities brought the decision to adopt a pool size of 20 meters by 50 meters, the dimensions required for international swimming competitions. The construction of the pool was a reinforced concrete shell with through waterproofing. The shell was designed to both withstand unbalanced hydraulic pressure when the pool was full of water as well as earth pressure from the outside when the pool was empty. The curb and the bottom of the pool were lined with white mosaics and the sides with white enameled tiles.

Parks and monuments: the area reserved for the city park was approximately 300 mow. A great part of the area had been used for the sports center, which included a stadium, a gymnasium, and a swimming pool. The remaining area on the south bank of Jukong Creek was a well laid-out park with pools and hills. It had been open to the public since 1934. At the rear of the mayor's building stood the statue of Sun Yat-sen. It was located in front of the future memorial auditorium to be built at a later date. The statue was a double life size bronze figure in standing posture, supported by a heavy pedestal and a circular terrace of granite. The pedestal was decorated with carved Chinese design.

The Jukong wharf: a huge deep water wharf had been under construction near the mouth of Jukong Creek along the Huangpu River. The location was at the termination of Wuchuan Road, with the east and west axis of the street system in the new area. The new wharf was expected to draw part of the shipping from the overcrowded Yangtsepoo and Pudong wharves. A railway was extended to the wharf from the Shanghai-Wusong line, which was an advantage not

enjoyed by the existing wharves. The new wharf marked the start of the main port development scheme at Wusong, which was one of the ultimate aims of the City Planning Commission.

Workers' villages: an extensive housing plan was underway for the city government to improve the living conditions of the mud hut dwellers. Groups of low rent houses were built at different locations where such groups were needed most. The first group, already completed, was situated off Chimei Road between the International Settlement and the civic center. It consisted of 250 houses and covered an area of 40 mow of land. Each house consisted of two rooms with a kitchen and a toilet. In the center was the social center, which included a school, a clinic, an assembly hall, a cooperative store, public baths, and a tea house. The entire group was divided into three units, each being provided with a laundry and a toilet. Electricity and running water were also provided. Plans for three more groups were under way at different locations in the city.

The city cemetery: the first city cemetery located at the northwestern part of the civic center was completed in 1931. It had an imposing entrance and a large ceremonial hall. The ground covered a total of 150 mow. The cemetery was supervised by the Bureau of Health.

Airdromes: Shanghai boasted two airdromes. They were enlarged and their facilities improved. The Hungjao (Hongqiao) Airdrome, located at the western part of Shanghai was used for military purposes. It covered an area of 1,400 mow. The runway was 800 meters long and 50 meters wide. The Lunghwa (Longhua) Airdrome on the bank of the Huangpu River to the south was a commercial port for both land and seaplanes. The total area was 800 mow. Two runways cross each other, totaling 2,000 meters in length and 30 meters in width.

Road building: roads leading up to the civic center were revamped for a systematically laid out street system and well-paved road surface welcoming visitors to Jiangwan. To date,

approximately 40,000 meters of pavement had been laid ranging from 15 meters to 60 meters wide.

Other important public buildings that had already been completed or were in progress included the Telephone Exchange, The Testing Laboratory for Chinese Engineering Society, the Headquarters of the China Aeronautic Association, and the National Conservatory of Music; all located in the civic center area or nearby vicinity. Doon concluded that the building boom would eventually fill all unoccupied property in the Jiangwan area.³⁸⁰

On April 3, 1937, the Shanghai housing report paid tribute to the city government's model villages in replacing the former mud and straw huts, and provide healthy and clean living conditions for the working poor. Efforts were made by the Public Works Bureau to encourage new types of two stories dwellings for the Chinese, with adequate sanitation and safety standards.³⁸¹

Under Shen Yi's leadership, the Public Works Bureau continued to expand the lengths of routes and increased the number of lines and stops for buses, trams, and trolleys. By 1937, the routes, lines, and stops for each form of public transportation vehicle had increased significantly. Passengers could commute from the suburbs to the downtown areas, and vice versa faster. More lines and routes were added to the downtown areas where shopping and commerce had been the most vibrant, and traffic congestion had been the most severe. These additions made the commuters' travel much more accessible and convenient as passengers had a plethora of choices for public transport.

³⁸⁰ Doon, Dayu. "New Shanghai". *China Quarterly*, December 1935: p.87-98.

³⁸¹ *The China Weekly Review*, April 3, 1937.

Figure 7.1: Tram Routes in April 1937

Tram routes had been expanded and connected the downtown area to the suburbs.

Source: Shanghai Municipal Library Press. *The Album of Shanghai during the Past 150 Years*. Lao Shanghai Di Tu (Old Shanghai Maps). Shanghai Huabao Chubanshe, 2001: p. 123.

Map of THE Shanghai Trolley Line

Published in 1937. Published by Shanghai Public Utilities Bureau.

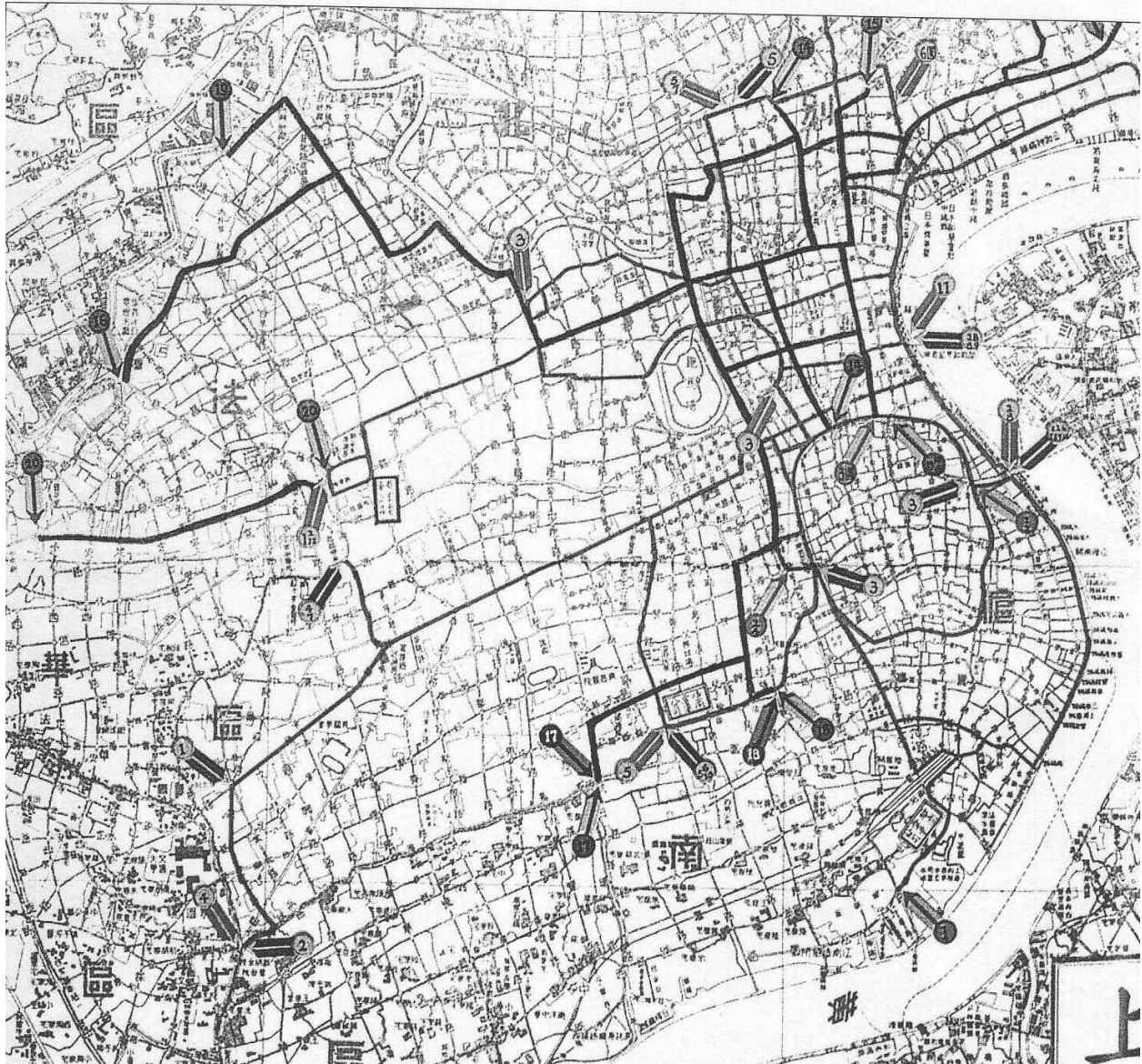


Figure 7.2: Trolley Routes in April 1937

Trolley routes covered the roads where tram tracks were not laid since trolleys did not need tracks.

Source: Shanghai Municipal Library Press. *The Album of Shanghai during the Past 150 Years*. Lao Shanghai Di Tu (Old Shanghai Maps). Shanghai Huabao Chubanshe, 2001: p. 124.



Figure 7.3: Bus Routes in April 1937

Bus routes were primarily located in downtown areas with many stops along the way.

Source: Shanghai Municipal Library Press. *The Album of Shanghai during the Past 150 Years*. Lao Shanghai Di Tu (Old Shanghai Maps). Shanghai Huabao Chubanshe, 2001: p. 122.

Achievements of the Greater Shanghai Project

Despite the financial difficulties that prevented the Greater Shanghai Project from reaching its potential, there were numerous achievements and significant progress made. Public health and mass education were the two areas where many significant improvements had been

accomplished. In the road systems, the boulevards built in front of the civic center connected with to the new harbor, the new railway station, and the main roads of the neighboring districts as well as the main roads of the International Settlement. Other roads were expanded or lengthened for maximum convenience to people of the business and residential districts. The total mileage of roads under construction by the early 1930s was about 170 kilometers. In certain sections, the roads crossed each other at right angles. Shanghai's climate required houses to have a southern exposure to the sun. To make this possible, roads running east to west were longer than those running from north to south. To reduce the number of crossings, which may interfere with the traffic of the main roads, secondary roads with sufficient lengths were built running parallel to the boulevards. Parks and recreation grounds provided for exercise and running around the creeks had been built.

A network of main arteries had been carefully laid out to provide for the relief of overloaded routes and a free movement of traffic between various districts. The general flow of traffic was between north and south. There were five principal roads running north and south to take care of traffic flow. A belt highway system was planned to link all neighboring towns and villages on both sides of the Huangpu River. The streets were planned so that they intersect mostly at right angles. With the exception of the limitation set to existing main roads, the street blocks run east and west so that the buildings faced mostly either north or south. This minimized the intensive summer sunlight. In the residential districts, circumferential or ring streets were introduced. They reduced the through traffic and noise in residential neighborhoods. Open public spaces were designed at the intersection of major streets.

The most impressive feature of the new city in Jiangwan was the civic center adorned with Chinese architecture. Taking the shape of a cross and covering an area of approximately

2,000 mow (333 acres), the civic center of Greater Shanghai was located at the intersection of two cross-axes. The three tracked boulevard known as Sanmin (Three Principles) Road was linked to Wuchuan (Five Rights) Road. The civic center began at the main station and terminated at the Huangpu River. The center of Shanghai was marked by a 50 meter pagoda, which could be seen from all directions. The mayor's building was built north of the pagoda, flanked by eight buildings comprising the eight bureaus of the city government. Another 1,000 mow (170 acres) of ground were built as public space. Approximately 120 mow (20 acres) were devoted to a plaza where public meetings could be held. A huge reflecting pool, about 600 meters long, with double-tracked boulevards on both sides, marked the southern approach to the civic center. Two smaller pools were placed to mark the east and west entrances.

Immediately behind the mayor's building stood the municipal auditorium, which could accommodate 3,000 people. Clustered around the civic center were the library, museum, art gallery, court houses, and other public buildings. An existing waterway of approximately 20 meters wide supplied the water the pools. Several bridges were added to the waterway for aesthetic appeal. At the south end of the long pool was a five arched memorial representing the gateway to the civic center. The existing main thoroughfare, Hsiang Ying Road crossed diagonally at the extreme south of the civic center. The grounds were embellished with gardens, monuments, pools, fountains, bridges, etc. to form with future planned buildings a monumental area of significance.³⁸²

At the end of 1933, some two thirds of the entire scheme of 500 kilometers of trunk roads had been completed. Between 1927 and 1933, the Public Works Bureau made significant investments in urban infrastructure:

³⁸² *The China Yearbook, 1933*, p. 673-677.

Table 7.1

	US Dollars
Bridges and culverts	\$624,000.00
Jetties and embankments	\$211,816.30
Municipal buildings	\$740,000.00
Improving the water system	\$153,777.96
Repairing wharves	\$114,436.46
Public parks and playgrounds	\$150,000.00

At the end of 1932, there were 8,514 street lamps, totaling 592,305 watts. Twelve months later the corresponding figures increased to 9,589 lamps and 663,670 watts. In 1927, the combined supply of the two waterworks at Nanshi and Zhabei was 65,200 cubic meters. By 1933, it had increased to 165,200 cubic meters. Previously, there were six electric power companies operating within the Chinese jurisdiction. At the suggestion of the Bureau of Public Utilities, the four smaller companies were amalgamated with the larger ones, for greater efficiency. The combined capital of electric power companies and waterworks was estimated at \$12,390,000 (U.S. dollars).

Six omnibus companies handled the problem of cheap long distance transportation between the city and suburbs such as Minghong, Sungkiang, Tachang, Taitsang, Liuho, and Yanghang, as well as Choupuchen and Chuanshahsien on the Pudong side. Within the limits of Nanshi and Zhabei, passenger traffic was operated by one omnibus company and one tramway company. Tramway traffic was confined to Nanshi at the southern section, along 19.4 kilometers of rails. The capitalization of the long distance and city omnibus companies combined for \$3,332,500 and the aggregate traffic mileage covered 200 kilometers.

To solve the problem of safe and rapid transportation between Shanghai and Pudong, a public ferry service was inaugurated in 1928 by the city government. In 1933, eleven large boats

running daily on scheduled time carried 7,320,000 persons that year to the points on the east bank of the Huangpu River as far as Kaochiao and Wusong. Wharves located at the left bank of the Huangpu River that had been formerly operated by private companies were taken over by the city government and put under the administration of the Bureau of Public Utilities in 1931. After taking control, the bureau immediately carried out an improvement program. In order to facilitate the docking of ships, this portion of waterfront of about 1,500 meters long was dredged twice, with a sum of about \$100,000 for the costs. The pontoons and part of the bulkhead walls not in good condition were immediately repaired and rebuilt. All work was completed before May 1933, costing over \$160,000. The bureau not only repaired old wharves but also built new ones. In addition to the thirteen old wharves, three new ones were built and two more were under construction. For the sake of convenience and safety of passengers, the bureau paid special attention to the maintenance of wharves. The results of the improvement works attracted more ships to the wharves. From the beginning of July 1932 to the end of June 1933, the number of ships using the wharves was 3,896 with an aggregate of 2,961,128 net registered tons.

A private omnibus company, operated in Nanshi went bankrupt after the Japanese attack in 1932. The Bureau of Public Utilities inaugurated a bus service in Nanshi on April 1, 1934 on the line of municipal ownership. Sixteen cars were in service. The carrying capacity of each was three and a half tons. The design of the body was by every means to provide the passengers with as much comfort as possible. There were three new routes: first between West Gate and Longhua, second across the city, and third around the city circle.

To help develop Pudong, which had become increasingly populated, an artesian well was bored by the city government as an immediate solution to the problem of water supply. Plans were under way to construct a reservoir at a cost of about \$300,000 capable of furnishing 364

liters a minute for ten years. Before a vehicle or boat can ply within the limits of the city government's jurisdiction, it must apply first to the Bureau of Public Utilities for registration. Licenses were approved after the bureau has approved its traffic worthiness. The Bureau of Finance must receive the appropriate fees before a license was awarded. Up until the end of 1933, a total of 93,287 vehicles and 45,611 boats were officially registered. Of the vehicles registered in 1933, 8,670 came under the category of motor vehicles. Consequently 16,518 chauffeurs and drivers, 53 motor car companies and car hire garages, and 158 gasoline stations were similarly registered with the Bureau of Public Utilities.

To eliminate the dangers attendant upon the supply of water and electricity, registration was also required. The registration figures for 1933 included:

Table 7.2

Dealers in water pipes	154
Well-drilling firms	26
Water-pipe installing laborers	1,553
Dealers in electrical supplies and installations	374
Electric fitters	2,334

According to the electric installations of a theater, hotel, school, hospital, or any institution for the accommodation of large crowds, inspections must be rigorously examined before a permit could be issued for the supply of electric current.

Pending the settlement of the problem of policing and administering Settlement Extension Roads, the matter of installing telephones in residencies situated on these roads had been settled by temporary negotiations between the Shanghai Telephone Company and the city government. The city government had been determined not to permit further encroachment by either the International Settlement or French Concession on additional Chinese territories. At the

end of 1933, nineteen public clocks had been installed in important thoroughfares by the Bureau of Public Utilities, with thirteen in Nanshi and six in Zhabei.³⁸³

As of January 1, 1934, the city government of Great Shanghai functioned from its new buildings in the civic center. The removal of the city government's administrative offices to the new civic center in Jiangwan was the result of nearly seven years of careful planning and execution. On January 1, 1935, Wu Tiecheng released a statement outlining plans for Greater Shanghai by focusing on several specific agenda:

Anti-illiteracy movement- the government had made special efforts to provide adult education for those between the ages of 15 to 30 to reduce illiteracy and promote mass education.

School construction- plans were made for the establishment of one vocational middle school and four agricultural schools in Jiangwan. Special attention was paid to primary and secondary education to strengthen the foundation of civic training. Two model middle schools were established in the civic center, with fifteen additional primary schools opened in the central and outlying areas of Greater Shanghai.

Social reconstruction-the establishment of children's nurseries became an important part of municipal reconstruction. In the commercial and industrial centers, numerous factories were established. Other projects such as improvements of living conditions for rickshaw pullers, more public housing, etc. were on the agenda to be carried out as financial resources permit.

Water conservancy- appropriations had been made to repair sea walls. However, due to financial limitations, the situation had not been completely resolved.

Communications improvement- the facilities for commercial aviation had been upgraded with Longhua airport being the largest airport in China.

³⁸³ *The China Yearbook, 1934*, p. 753-754.

Social welfare programs- the municipal government planned to continue construction of model villages to accommodate the working poor, as well as to provide affordable housing for migrant workers such as rickshaw pullers.³⁸⁴

Three major generating plants: the Zhabei Waterworks and Electricity Company, the Chinese Power Company, and the Pudong Power Company generated 124,901,114 units in 1935. Water was supplied by the Inland Waterworks Company and the Zhabei Waterworks and Electricity Company, which in 1935 supplied 43,260,401 liters in the Greater Shanghai area. Five omnibus were in operation in the Chinese jurisdiction: the Chinese Omnibus Company, the Shanghai-Minghong Omnibus Company, the Shanghai-Taitsang Omnibus Company, and the City Government Omnibus Administration. These five omnibus companies carried a total of 37,786,098 passengers in 1935. A public ferry service operated twelve ferry boats and thirteen calling stations, and transported 11,989,672 passengers in 1935.

Statistics for vehicle licenses granted in 1936 were:

Table 7.3

	Licenses
Boats	36,090
Private motor cars	6,518
Hire cars	891
Motor trucks	1,579
Motor bicycles	467
Public rickshaws	23,335
Wheelbarrows	14,973

³⁸⁴ *The China Yearbook, 1935*, p. 296-298.

On New Year's Day 1936, Wu Tiecheng reviewed the progress of the Greater Shanghai municipality and outlined future plans. He noted that in the first four years, the following steps in reconstruction were achieved:

- 1932: rehabilitation of devastated areas
- 1933: establishment of civic center
- 1934: cultural restoration
- 1935: social reconstruction

Immediately after the 1.28 crisis, steps were taken to provide relief to people in the devastated areas in the form of loans for building, seeds for sowing, and capital for resumption of business. The municipal government focused on rebuilding the destroyed or damaged roads, bridges and drainage works in the principal roads of Zhabei, including Paoshan Road, Hunghsing Road, Paoshing Road, Paochang Road, and Jukiang Road. Approximately ten million U.S. dollars were spent on building new roads and bridges, repairing sea dykes and the construction of public buildings. The rebuilt municipal wharf at Nanshi could enable steamers of the length of 300 feet and a draught of 14 feet to berth with comparative ease.

For the improvement of public health, new health centers, opium centers, and additional hospitals were built. In education, much had been done to raise the standard of the curriculum of public schools in the promotion of compulsory education. Plans were underway for the continuation of more public housing and the extension of Hongqiao airfield as well as the enlargement of Longhua airport. Wu had been hopeful that more workers' villages could alleviate housing problems and that the facilities for travel and communications between the commercial metropolis and the far away cities could produce more conveniences.³⁸⁵

³⁸⁵ *The China Yearbook, 1936*, p. 462-463.

Municipal Finances

The high costs of maintaining the Greater Shanghai Project put the municipal budget in increasing debt by the 1930s. Eventually, many of the more expensive projects that had been planned at the onset of the campaign had to be scrapped.

Table 7.4

Shanghai Municipal Government Revenues and Receipts (Chinese Yuan)

Source	1932-33	1933-34	1934-35	1935-36	1936-37
House tax	2,261,472	2,470,189	2,708,852	2,643,185	2,939,000
Property tax	456,900	758,756	1,225,099	1,283,590	1,495,715
Sales fees	622,381	472,136	420,185	313,101	339,900
Vehicle tax	1,210,893	1,468,159	1,749,707	1,725,925	1,726,934
Boat tax	401,943	439,938	401,800	371,990	373,128
Harbor fees	644,260	700,276	519,259		
Municipal incomes	203,198	214,470	301,754	511,349	403,564
Administrative fees	738,103	731,297	810,401	820,679	835,552
Municipal properties	941,889	962,522	2,167,599	1,115,502	1,295,126
Repayment of aid funds	500	1,000	67,483	158,757	131,796
Business tax	172,341	337,188	315,416	302,259	304,300
Building works	165,231	266,549	318,557	269,310	
Other revenues	1,614,745	1,343,695	1,319,533	828,192	839,913
Total	8,789,585	9,465,899	11,806,386	10,343,339	10,684,928 ³⁸⁶

³⁸⁶ *Yinhang Zhoubao* (The Bankers' Weekly). "Shi Nianlai Shanghai Shi Zhi Caizheng" (Ten Years of Municipal Finances in Shanghai). July 13, 1937, p. 6-8.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.141-142.

Table 7.4 Continued

Shanghai Municipal Government Expenditures (Chinese Yuan)

Expenditure	1932-33	1933-34	1934-35	1935-36	1936-37
General administration	687,541	803,814	1,308,250	1,181,018	1,126,423
Finance Bureau	378,785	495,368	648,260	436,255	378,363
Public Security Bureau	3,496,606	3,435,076	3,656,252	3,234,600	3,463,671
Education Bureau	1,245,017	1,503,965	1,682,798	2,092,935	957,596
Social Affairs Bureau	284,451	356,787	306,925	247,438	129,195
Public Works Bureau	1,903,913	2,751,627	4,423,755	2,309,917	792,542
Health Bureau	333,907	367,986	451,952	532,610	406,829
Public Utilities Bureau	374,700	392,523			
Land Bureau	362,295				
Allocations to GMD	158,753	170,753	173,640	163,753	133,980
Debt serving	909,769	1,307,210	1,597,788	1,574,929	1,462,760
Aid funds	295,225	376,610	534,681	535,449	350,640
Retirement pensions	19,465	25,872	21,950	17,119	24,341
Miscellaneous	165,231	266,549	318,557	269,310	193,953
Other	195,790	155,092	202,915	312,277	378,202
Total	10,811,548	12,409,232	15,327,743	12,907,610	9,693,495 ³⁸⁷

Government Revenues vs. Government Expenditures (Chinese Yuan)

	1932-33	1933-34	1934-35	1935-36	1936-37
Total Revenues	8,789,585	9,465,899	11,806,386	10,343,339	10,684,928
Total Expenditures	10,811,548	12,409,232	15,327,743	12,907,610	9,693,495
Surplus or Deficit	-2,021,963	-2,943,333	-3,521,357	-2,564,271	991,433

While municipal revenues increased, the annual expenditures increased even faster. This caused the annual deficit to widen. The financial difficulties of supporting so many large scale reconstruction and development projects made it impossible for the municipal government to sustain the pace of projected progress. Wu Tiecheng's government had no choice but to cut many

³⁸⁷ *Yinhang Zhoubao* (The Bankers' Weekly). "Shi Nianlai Shanghai Shi Zhi Caizheng" (Ten Years of Municipal Finances in Shanghai). July 13, 1937, p. 6-8.

Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.145-146.

proposed projects and the Greater Shanghai Project faltered. The biggest costs were in public security, public works, and debt serving. These areas were crucial to the GMD's consolidation of power, and the inability to continue planned initiatives were embarrassing for the municipal government to face.

The government had been increasing allocations to the public force to ensure law and order would be maintained. The reason for the large police force was political. The GMD central government needed to keep peace in a city from which the regime drew a large proportion of its resources. Given the experiences of April 1927, the GMD was fearful of political demonstrations or riots by worker unions, students, and mostly Communist sympathizers. Underground Communist activities, especially those that took place in the foreign settlements gave justification to the GMD to maintain a substantial police force in Shanghai.

After 1932, the Shanghai municipality had to finance its own defense. Under the cease fire agreement with the Japanese at the end of 1932, Chinese national troops could no longer remain in Shanghai, to the east and west of the settlements. Wu Tiecheng's administration had to build up a peacekeeping local police force. Expensive construction projects were the second area in which the municipal government invested a lot of money. The high costs of recovery and reconstruction of heavily damaged areas after the Japanese attack, and the grandiose building plans in Jiangwan were simply too expensive to sustain. Since Shanghai was the wealthiest city in China, the municipal government also had to allocate funds to the GMD's central government in Nanjing. Annual funds to the GMD also amounted to a fairly substantial portion of the budget. The major imbalances between annual revenue and annual expenditure proved to be too difficult for Wu Tiecheng's administration to continue. While progress was made in urban planning, it

was achieved at the cost of severe indebtedness and deficits that would drag the municipal government to financial bankruptcy.³⁸⁸

The New Life Movement

Besides building a new city center, the GMD's other primary agenda was the consolidation of power and solidification of control of the Chinese population to a more grassroots level. The New Life Movement was launched on Chiang Kai-shek's orders in April 1934 to achieve this purpose. The New Life Movement was disguised as a program of proper moral thought and personal behavior. The initiative attacked evil customs such as extravagance, greed, laziness, deception, treachery, gambling, lust, etc., that were considered part of the "feudal gentry". The GMD used the concept of national revival and national patriotism to attempt to win over people's hearts and minds through this "renew life" campaign. Other measures of the New Life Movement included restrictions on smoking, prostitution, and indecent Western behaviors. The New Life Movement attempted to link immoral or indecent behavior with Westerners, and hoped such an association would force Chinese citizens, especially those living in foreign settlements to abandon Western ways. The push for traditional Chinese moral values was geared toward encouraging the Chinese to accept the GMD as the legitimate rulers of China.

The GMD focused on Jiangwan and Wusong as experimental districts where the New Life Movement could be enforced. The symbolic setting of this movement was the new civic center in Jiangwan. It was from the civic center that speeches were made by the leaders of the Public Security Bureau to ask the citizens of Shanghai to reject immorality and accept the ethics of the New Life Movement. Propaganda campaigns targeted the Chinese by convincing them that foreigners considered the Chinese to be inferior, and that it was absolutely paramount that

³⁸⁸ Henriot, Christian. *Shanghai 1927-1937: Municipal Power, Locality, and Modernization*. Berkeley and Los Angeles: University of California Press, 1993: p.148-150.

the Chinese stand strong and show foreigners that they were capable of running their own country.³⁸⁹ The New Life Movement pumped much funding into the Public Security and Education bureaus, as these branches of the municipal government became key components of the campaign.

Chiang Kai-shek created a secret police known as the Blue Shirts to identify and punish anyone considered a threat to the GMD regime. Chiang had lashed out at the supposed weaknesses of Chinese society, such as undisciplined, selfishness, and moral corruption. If China would ever recover from foreign aggression, then it was necessary to instill a sense of revolutionary spirit within the Chinese population. The Blue Shirts were designated to bring out a sense of nationalistic fervor and patriotic zeal. The GMD linked Confucianism with their political agenda by using Confucian values as hallmarks of GMD political ideology. The real purposes were to find any suspected Communists or other dangerous elements of Shanghai's Chinese society, and have them eliminated. The GMD adopted the New Life Movement after the fascists in Italy and the Nazis in Germany after Chiang had witnessed the successes these regimes had in generating nationalism within their citizens.³⁹⁰

What is the Legacy of the Greater Shanghai Project?

Despite the enormous investments put into the Greater Shanghai Project, no major movement of the population into Jiangwan took place. While Jiangwan was created from scratch, and a new city center was constructed; the infrastructure as well as employment opportunities, entertainment, education, etc. were still not enough to entice large segments of Chinese citizens to relocate there. There were several reasons behind this. First, the Japanese attack on Zhabei in

³⁸⁹ Wakeman, Frederic. *Policing Shanghai, 1927-1937*. Berkeley and Los Angeles, University of California Press, 1995: p.232-238.

³⁹⁰ Eastman, Lloyd. *The Abortive Revolution: China Under Nationalist Rule, 1927-1937*. Cambridge, MA: Harvard University Press, 1990: p.66-70.

1932 had left the Chinese residents there feeling unsafe and fearful of another attack. The Japanese did not dare to attack the International Settlement or the French Concession. The Chinese residents living in the foreign settlements felt much more safe and secure knowing that they would be protected by the foreigners controlling their jurisdiction in case of warfare with the Japanese. Second, the residential neighborhoods, entertainment and leisure areas for shopping and commerce (such as Nanjing Road and Avenue Joffre) were much better developed and convenient than the new Chinese city center. While Jiangwan had established residential and commercial zones, they were poorer and less developed than the settlements. There were less entertainment, shopping, and leisure opportunities. Third, the distance of Jiangwan was another barrier. While new roads were built, and new routes and stops were placed, traveling to Jiangwan was still much more inconvenient than it was in the settlements. The longer distances needed to travel to Jiangwan discouraged many Chinese professionals and middle class to move there because of the inconveniences of commuting from home to work.

On July 7, 1937, the Japanese launched their full fledged invasion of China after the Marco Polo bridge incident. The ensuing Sino-Japanese war ended any attempts to continue the Greater Shanghai Project. Ten years after it began, the Greater Shanghai Project was remembered for its unfulfilled promises. The GMD had not achieved their two primary goals: to build a new city center to show foreigners that a Chinese regime could effectively govern a modern metropolis, and to strengthen and solidify their control over the Chinese population of the city. To the disappointment of the GMD, the vast majority of the Chinese population did not relocate to Jiangwan, the heart of Shanghai's commerce and industry remained in the foreign concessions, and the Japanese attack on Zhabei humiliated the Chinese military.

While the Greater Shanghai Project did not achieve its primary goals and objectives, this campaign cannot be considered a failure. Numerous accomplishments and significant progress were made in public infrastructure, transportation, urban planning, public health, education, etc. that should not be ignored. While the Japanese attack certainly severely affected the development of the Greater Shanghai Project, it could be argued that perhaps even without the Japanese destruction in 1932, the financial difficulties would not allow the Greater Shanghai Project to be carried out to its original plans. In the first half of the Greater Shanghai Project, it became evident that the high costs involved in the expenditures would be very difficult for the municipal government to maintain the momentum of the planned progress. The second half of the Greater Shanghai Project further intensified the financial limitations that ultimately doomed the campaign. Without the Japanese attack, perhaps more infrastructures could have been built; but it would not have been feasible to achieve the entire blueprint of the goals set in 1927. Sooner or later, the financial restrictions would have forced the municipal government to abandon important development projects and slow down the campaign.

It took the British and French decades to build up a modern city. The Westerners had both the technical know-how and expertise, as well as the financial capabilities that the Chinese lacked. Even then, the British and French had to slowly build and develop the International Settlement and French Concession to a level similar to that of European cities. It would have been impossible and simply unachievable for a Chinese government to expect to catch up with the foreign concessions in terms of infrastructure, accessibility, and quality of life in a matter of a decade. The Greater Shanghai Project was simply too ambitious and too grandiose of a plan to be carried out realistically. The legacy of the Greater Shanghai Project was that of a nationalistic

modernization campaign that had the right intentions, but was doomed by bad timing and its over-ambitious initiatives.

Chapter 8

Conclusion

What is the relationship between technology and society? Does technology determine the outcome of a society's institutional or social structure or does a society's values and needs determine what kind of technology is developed? This overarching question links technology and society together and asks about their relationship to each other, and how one affects the other. Understanding their mutual interdependence on each other, and how technology and society are inseparably linked is crucial to the study of the history of technology. Two major viewpoints attempted to explain this relationship between society and technology: technological determinism and social constructivism.

Technological determinism argues that a society's technology determines its cultural values, social structure, and people's lifestyles. The trend or trajectory that proponents of technological determinists argue for is that technology will develop in a predictable pattern beyond cultural, political or social factors. Determinists believe that technology will impact society in such a way that society will be socially conditioned or be forced to reorganize and restructure itself to accommodate and support technological development and influences. Within the technological determinist camp, there are two types: the hard determinism and soft determinism groups. Hard determinism describes technology as developing and affecting society without any social factors dictating its trajectory, or that technology will develop independently of any outside forces. This concept argues that technology itself is the single most powerful and influential force in determining and regulating society's changes, where people must adapt themselves and make themselves fit the outcomes of new technologies. Soft determinism is not so rigid in its explanation on the impact of technology on people, as it argues that technology is the guiding force or the primary factor behind changes in society, but that people still have a

chance to make decisions on the implementation of technology early on when it is first introduced.

Social constructivism, on the other hand argues that people and society determines what types of technology will be developed and used according to society's needs and cultural values. The specific conditions and demands of a particular society will dictate what kinds of technologies will be developed, how those technologies will be utilized, as well as the size and scale of new technologies used. Social constructivists are on the opposite side of the spectrum from technological determinists, and argue against the notion that technology is the driver of society's changes.

Philip Scranton is an advocate of social constructivism and presented the concept of "local determinism", where technology is construed as part of a larger socio-cultural process. In this concept, the deterministic descriptions are reduced to the local level, where the particular conditions or environments of a specific location, region, or area determines the technological trajectories or paths taken there locally.³⁹¹ Langdon Winner argued that technology is not merely instruments to human activity but that they are powerful forces that give meaning and direction to people's lifestyles. Winner's arguments are based on his assertion that artifacts contain political properties and carry with them certain political agenda. He noted that "first are instances in which the invention, design, or arrangement of a specific technical device or system becomes a way of settling an issue in the affairs of a particular community. Second are cases of what can be called "inherently political technologies", which are man-made systems that appear to require or to be strongly compatible with particular kinds of relationships."³⁹² Winner examined the use

³⁹¹ Scranton, Philip. "Determinism and Indeterminacy in the History of Technology." in Merritt Roe Smith and Leo Marx. *Does Technology Drive History? The Dilemma of Technological Determinism*, p.143.

³⁹² Winner, Langdon. *The Whale and the Reactor: A Search for Limits in an Age of High Technology*. Chicago: University of Chicago Press, 1986, p.22.

of technology in the context of who gets to decide which types of technologies will be designed and utilized, and the political motives of those in power that want to use technology as a mechanism for social control. His analysis of the use of certain technologies in architecture, city planning, and public works revealed that those in power, such as government officials, powerful lobbyists, wealthy capitalists, etc. wanted to use certain technologies to achieve their own political or economic agendas, and that technology becomes an instrument for their power and domination. He concluded that technology cannot be free from political influence, and that it is the political nature of a particular society that shapes and defines which technologies will be useful, and how those “useful” technologies will be advanced to promote certain political or social causes.

The social construction of technology described the development process of a technological artifact as an alternation of variation and selection. Trevor Pinch and Wiebe Bijker noted that in deciding which problems are relevant, the social groups involved with the artifact and the meanings of the artifact play a significant role when they define that a problem arises. They argue that the relevant social groups are institutions or organizations such as the government, the military, an industrial company or groups of influential individuals who have a personal stake in the outcome of new technologies and problems they intend to solve. These relevant social groups are attached to a specific artifact because this artifact has certain meanings for them, and they want to use their own personal connections or influence to determine how specific artifacts are used, which problems or issues these artifacts can be used to address or solve, and how these artifacts will be incorporated into the larger society.³⁹³

³⁹³ Trevor Pinch and Wiebe Bijker. “The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other” in Wiebe Bijker, Thomas Hughes, and Trevor Pinch (editors), *The Social Construction of Technological Systems*, Cambridge: MIT Press, 1998, p.26-30.

So was Shanghai's public transportation history a case of technological determinism or social constructivism? In looking at this question, it is important to look at the impact of very rapid population increases that occurred from the mid 19th to the early 20th century. In 1852, a little over half a million people lived in Shanghai. By 1930, more than three million people lived in the three jurisdictions of Greater Shanghai, and by 1949 more than five million residents called Shanghai home.³⁹⁴ This huge population increase put tremendous pressure to come up with a modern and efficient public transportation system that can accommodate the population growth and deal with high population density.

Population density increased significantly from 1865 to 1942, with much higher density in the foreign settlements:

Table 8.1

Shanghai Population Density: People Per Square Kilometer (1865-1942)

Years	Shanghai Average	Chinese City	International Settlement	French Concession
1865-1866	1,240	980	37,758	
1914-1915	3,600	2,236	30,262	
1930	5,943	3,441	44,596	42,544
1935	7,000	4,134	51,317	47,747
1940-1942	5,453	2,991	70,162	83,599 ³⁹⁵

Population density had risen over four times for the entire city from 1865 to 1942. The foreign settlements had far higher population density than the Chinese city. Because of the high density, it became imperative for the International Settlement and French Concession to develop the modern roads and public transport necessary to make travel and commute more efficient.

³⁹⁴ *Shanghai Tongzhi*, (Shanghai Almanac), Volume #1. Shanghai: Renmin Chubanshe, Shanghai Academy of Social Sciences Publisher, 2005: p. 664-665.

³⁹⁵ *Shanghai Zujie Zhi* (Shanghai Foreign Concessions). Shi Meiding ed. Shanghai: Academy of Social Sciences Publisher, 1994: p. 122.

Traffic congestions, especially in crowded downtown areas became a major headache that had to be solved. The high population density and continuous population growth were social forces that prompted technological developments to be made to deal with society's demands and needs. Yet, technology had also shaped the urban layout of the city. In the International Settlement and French Concession, besides foreigners, the wealthy and even middle class Chinese population wanted to live there because of better infrastructure, roads, and transportation access. As a result, the more technologically advanced foreign territories had far higher population densities, and became home to Shanghai's wealthy Chinese citizens. The outbreak of World War II saw Chinese citizens leave the Chinese municipality to flock to the concessions for safety and protection, as well as a huge influx of European Jews and Russians settling in the French Concession because of cheaper rent than the International Settlement. The number of foreigners of all nationalities increased significantly from 1843 to the early 20th century as they could live a similar lifestyle that they had enjoyed back home, but also capitalize on the opportunities a semi-colony like Shanghai offered in terms of personal finance, freedom, safety, and protection. Better urban infrastructure meant a higher standard of living, and that was what attracted over millions of Chinese migrants from other provinces to come to Shanghai to seek out a better life.

Looking specifically at the International Settlement, population density differed in the four districts.

Table 8.2

Population Density in the International Settlement: People Per Square Kilometer (1900-1935)

Year	Central District	Northern District	Eastern District	Western District
1900	61,364	44,053	5651.9	4864.6
1905	64,075	66,545	6908.3	8717.5
1910	65,449	67,825	8269.9	9260.1
1915	75,301	78,046	12981.4	14226.5
1920	79,461	92,267	18,798.60	20215.9
1925	64,619	81,191	24,322.90	24,524.10
1930	69,608	84,935	32,351.50	35,299.50
1935	64,109	100,770	41,777.80	45,703.20 ³⁹⁶

The Municipal Council of the International Settlement began building new roads and buildings when it became apparent that overcrowding had become a major issue in the central district. As a result of new road constructions, extensions, widening; and housing built in the northern, eastern, and western districts to alleviate the overcrowded and congested central district. The central district was the most densely populated before 1900 because it was the earliest area to be developed. Population pressures forced the Municipal Council to expand their territories and shift the population away from the central district to the surrounding areas. The northern district saw the biggest upgrades in urban infrastructure, and as a result became the most densely populated area of the International Settlement by the early 20th century. Both technological developments and society's needs contributed to the growth of the city's population as well as a better quality of living for the residents.

³⁹⁶ *Shanghai Zujie Zhi* (Shanghai Foreign Concessions). Shi Meiding ed. Shanghai: Academy of Social Sciences Publisher, 1994: p. p. 122.

Do the forces of technological determinism and social constructivism absolutely have to oppose each other? Can there be a medium between these two theories? Thomas Hughes considered himself to be an intermediary who can bridge the gap between technological determinism and social constructivism through his concept of technology momentum. Hughes's introduction of technological momentum was the most convincing theory that can connect the arguments for technological determinism and social constructivism. His central argument was that technological systems, after they had been consolidated acquire momentum. They have already amassed the technical and organizational components, and they possess the directions and goals in which they will progress in the future. Mature technological systems are very much like inertia, when they have built up momentum, it will be very difficult if not impossible to reverse their trend once they have been solidified. Hughes explained that once a large mass of technological system has been developed, the organizations and people committed to it would help propel it forward in a motion of great momentum. Inventors, engineers, scientists, managers, investors, civil servants, and politicians all have a personal stake involved in the growth and durability of these technological systems. Communities of practitioners, networks of producers and suppliers all added to system momentum because vested interests, fixed assets, and sunk costs forced everyone involved in these technological systems to make sure that these systems will be successful for their own sake.³⁹⁷

Thomas Hughes reiterated his argument for technological momentum in *American Genesis* where he concluded that large technological systems represent powerful vested interested of numerous important people with specialized skills and knowledge appropriate for these systems in which they are a part of. These people and their investors in technological

³⁹⁷ Thomas Hughes, "The Evolution of Large Technological Systems" in Wiebe Bijker, Thomas Hughes, and Trevor Pinch (editors), *The Social Construction of Technological Systems*, Cambridge: MIT Press, 1998, p.76-77.

systems have constructed a bulwark of organizational structures, ideological commitments, and political power to protect themselves and their systems.³⁹⁸ This explanation perhaps best answered the history of public transportation in Shanghai. In the foreign settlements, Europeans needed to build and implement a modern public transport system to accommodate the growing demands of an increasing population. They utilized the blueprint and technical expertise from Western cities that had already successfully implemented these practices to construct a new city in Shanghai that can meet their standards of living. In order to encourage more Europeans to come settle in Shanghai, the International Settlement and French Concession needed to build up a modern metropolis in the East that would be attractive in terms of commerce, comfort, and convenience. The major players involved included politicians on the British and French municipal councils, prominent financiers, and engineers who all had enormous personal stakes vested in building new infrastructure such as public transportation.

The Chinese had been deeply envious and resentful of the power, wealth, and privileges that Westerners had established in their city. However, the Chinese were also pragmatic and practical. When it became obvious that Western technology such as machine-powered vehicles and road constructions could bring modern convenience and a better way of life, the Chinese quickly adopted these foreign technologies and integrated them into their own society. First, Western technologies were imposed on Shanghai by foreigners who had seen its successful implementation at home. Next, knowledge had to be diffused and modified to fit the specific conditions and confines of Shanghai's geographic and natural environments. At first, there had been concerns and suspicions about where these foreign technologies could be successfully implemented or installed in Shanghai. When safety could be assured, convenience and efficiency

³⁹⁸ Hughes, Thomas. *American Genesis: A History of the American Genius for Innovation*. Penguin Books, 1990, p.460-461.

could be achieved, there were no doubts that everyone in Shanghai accepted the arrival of modern technology as the new ways of life.

Public transportation, just like food, clothing, and shelter was a form of self-identification and became a public display of one's class or socio-economic status. A major reason why the "traditional" and the "modern" forms of transport could co-exist together was because each form of transport identified with and came to symbolize a different clientele. Westerners needed to travel in comfort, and personal automobiles, taxis, first class seats on the trams and trolleys, as well as the rickshaw provided them with various options. Wealthy as well as up-and-coming Chinese wanted to emulate foreigners and they too identified with the more expensive and comfortable transport options. For the upper class Chinese such as government officials and well-to-do businessmen, identifying themselves with the Westerners became a mark of distinction that separated them from the rest of the Chinese population. To be able to live like foreigners indicated that a Chinese was more cosmopolitan and sophisticated than his fellow countrymen. As a result, Shanghai's Chinese elites vigorously sought to live the "Western lifestyle", and to travel like Westerners by means of personal automobiles, taxis, first class seats, or having one's very own rickshaw puller were all goals wealthy and prominent Chinese actively pursued. For the middle class, options such as third class standing on the trams and trolleys, as well as the buses provided affordable and time-saving ways to commute. The poor could travel by wheelbarrow to navigate the close-quartered neighborhoods and alleyways. Public transportation was much more than just the mass transport of people from place to place. It became a form of material culture that could be benchmarked to judge one's social standing and financial status.

State-society relations were intertwined in the expansion and development of modern Shanghai. In both the foreign concessions and the Chinese city, a public and private partnership was formed to facilitate the expansion and improvement of access to public transport. The government set safety standards and issued licenses, as well as designated and approved specific areas for construction. The private sector supplied the resources such as private transportation companies in order to satisfy consumer demands. This partnership became crucial to both the successes of the public and the private, and this working relationship proved to be mutually beneficial to both sides. The government needed to utilize economic development to gain support among the people, and the private sector could gain significant financial profits from supplying the consumers' needs. Both sides had much to gain from this collaboration.

Technology has inherent political agenda attached to it as technology itself is politically embedded; as what technology is used, how it is used, and where it is used are all directly tied to politics. In Shanghai's case, this was no exception. Public transportation technology were used to not only justify and legitimize political authority, but it also defined which areas of the city would become more commercial vibrant and financial prosperous than others. The uneven development of public transportation accessibility meant that certain parts of the city would become more desirable and prosperous, and other less developed parts of the city would lag behind. The selection of locations or areas where new roads were built, and where public transportation routes, lines, or stops were not accidental. They were intentionally selected in order to serve or fulfill specific political or economic purposes. In the International Settlement, the northern, eastern, and western districts saw road extensions, widening, and new buildings built in order to expand the boundaries of the territory to previously Chinese held areas. By encouraging more foreigners to settle in Shanghai, and to invest in Shanghai's financial market,

the International Settlement could be turned into an oasis for British control in the Far East. Likewise, the French turned the Xujiahui area into a Catholic haven with the construction of the Catholic Cathedral there. As a result of heavy financial investments, the two busiest and most commercially vibrant streets were Nanjing Road in the International Settlement and Avenue Joffre in the French Concession.

After witnessing the successes of the foreign settlements, Chinese political leaders and leading businessmen began to copy the Western model because they too can sense the opportunities that these foreign technologies can bring to their own personal interests. The GMD needed economic development to legitimize their political rule, and Chinese businessmen saw opportunities for profit. They viewed Western technological inventions such as machine-powered vehicles, and road building technologies as crucial to achieve their own agenda: whether it was to strengthen political control or amass financial gain. Once these powerful players had invested their own personal agenda, technological momentum became impossible to turn back.

Jiangwan was designated as the experimental testing ground for the new Chinese city center. This designation was based on the availability of large amounts of unsettled land. But the distant location of Jiangwan proved to be inconvenient in terms of commute and travel. Despite constructing new roads and building a new civic center, along with designated administrative, commercial, industrial, and residential zones, the mass movement of people did not occur. Among the wealthy Chinese, the newly designated area of Jiangwan simply did not feel attractive to them. They had been used to living in the foreign controlled concessions where they had access to modern conveniences such as entertainment, leisure, and education at nearby disposal. To them, Jiangwan was like another faraway city. The Greater Shanghai Project was

simply not realistically feasible to be achieved in such a short time period. Even without the Japanese attack in January 1932 and the subsequent Japanese invasion in 1937, it would not have been possible for the Chinese municipal government to be able to compete with the financial resources and technical expertise that had been long available in the International Settlement and French Concession.

Given the reality that Shanghai was indeed governed by three separate political jurisdictions, it would have been impossible for the GMD to be able to build a unified Shanghai with Jiangwan as its city center. Although Jiangwan was built from scratch and tremendous investments were made, the fact was Jiangwan remained a peripheral part of Shanghai's urban landscape. The core of Shanghai remained in the International Settlement and the French Concession, and with the safety and protection these concessions afforded, it made no sense for the Chinese residents of the foreign settlements to leave for the uncharted territory of Jiangwan. The inability of the GMD to encourage the mass movement and resettlement of the Chinese population away from the foreign territories into Jiangwan was the biggest obstacle to the GMD regime's objective of consolidating and solidifying power in Shanghai. With limited control over the city and the Laws of Extraterritoriality in the foreign settlements, the GMD was unable to strengthen their control to a more grassroots level like they had envisioned when they launched the Greater Shanghai Project.

Could the Greater Shanghai Project have succeeded with more time, and perhaps peace and stability? Even with peace and stability, it would have been difficult, if not impossible for the GMD to generate the same type of public revenues needed for such a colossal reconstruction project. From the municipal financial standpoint, the Chinese municipal administration paled in comparison to the public revenues generated by the International Settlement and French

Concession. Massive urban renovation required huge financial investments from both the public and private sectors. Without the availability of continuous funding, even the best designed blueprint could not be built or completed to fruition.

The Japanese invasion of China in 1937 brought about the darkest period in Shanghai's modern history. On August 13, 1937, Japanese forces attacked Shanghai and launched what would become known as the Battle of Shanghai.³⁹⁹ For nearly three months, intense fighting broke out throughout the Chinese city. On November 8, Chinese troops began withdrawing from Shanghai. It was clear that the Chinese would not be able to fight off the better equipped Japanese forces, and the GMD planned to save their best troops by withdrawing them to the hinterland. By November 12, the Japanese had occupied Shanghai.⁴⁰⁰

The foreign concessions became known as the isolated island of China. The Japanese forces could not occupy the foreign territories, and thus waves of refugees flocked to the International Settlement and French Concession in search of shelter and protection. Many of the Chinese residents fled their homes after their neighborhoods were bombarded by the Japanese and sought refuge in the foreign concessions. The outbreak of World War II in Europe and the persecution of Jews brought tens of thousands of Jews to settle in Shanghai. As an international port city with no passport requirements, European Jews found sanctity and refuge in Shanghai. Stalin's purges in the late 1930s also brought waves of Russians fleeing their homeland into Shanghai. The foreign concessions became known as the "isolated island" of China because it was protected from Japanese military occupation as a result of its international status.

The Japanese attack on Pearl Harbor on December 7, 1941 and the subsequent declaration of war by the United States, Great Britain, and France on Japan the following day

³⁹⁹ *The China Weekly Review*, September 11, 1937: p. 23.

⁴⁰⁰ *The China Weekly Review*, November 13, 1937: p. 252.

changed the status of the “isolated island”. On December 8, Japanese forces moved in to occupy the foreign concessions since the British and French were now enemies of war. Shanghai was now entirely occupied by the Japanese.⁴⁰¹ To rule Shanghai, the Japanese installed a puppet regime under the leadership of the pro-Japanese Wang Jingwei. China’s relationship with the British and the Americans changed with the outbreak of World War II. Chiang Kai-shek’s Republic of China was now a key British and American ally in Asia in the war against imperialist Japan. The Sino-British and Sino-American Friendship Treaties signed on February 23, 1943 allowed the International Settlement to return to Chinese sovereignty at the end of the war.⁴⁰² The Japanese surrender in August 1945 was followed by Japanese withdrawal from occupied territories throughout Asia. By September 1945, Chiang Kai-shek’s GMD had once again control of China.

After the International Settlement was returned to China, Chiang began negotiating with the French for the return of the French Concession. On February 28, 1946, an agreement was signed between Chiang and French Prime Minister Charles De Gaulle that returned the French Concession to Chinese control.⁴⁰³ The return of both foreign concessions was a major triumph for Chiang as he had regained the colonial possessions that had been a humiliating experience for the Chinese for almost a century.

While the GMD had controlled all of Shanghai by 1946, the civil war with the Communists erupted immediately after the end of World War II. The GMD could not control runaway inflation, which turned the Chinese currency into almost worthless banknotes. From

⁴⁰¹ Xia, Dongyuan (editor). *Shanghai: Ershishiji Dabolan, 1900-2000* (Shanghai: News of the 20th Century, 1900-2000). Shanghai: Wenhui Chubanshe, 2001: p.540.

⁴⁰² *Shanghai Zhujie Zhi* (Shanghai Foreign Concessions). Shi Meiding ed. Shanghai: Academy of Social Sciences Publisher, 1994: p.110.

⁴⁰³ *Shanghai Zhujie Zhi* (Shanghai Foreign Concessions). Shi Meiding ed. Shanghai: Academy of Social Sciences Publisher, 1994: p.110.

January 1, 1946 to August 1948, the Chinese currency continued to lose value in exchange to the gold currency. Initially, the Chinese currency was pegged to gold, but uncontrolled inflation had crippled the Chinese economy.

Table 8.3

Chinese Currency Exchange to Gold (January 1946-August 1948)

	1.1946	2	3	4	5	6	7	8	9
Chinese Currency	100	100	100	100	100	100	100	100	100
Gold	100	165	186	182	206	222	226	237	249

	10.1946	11	12	1.195	2	3	4	5	6
Chinese Currency	100	100	100	100	100	100	100	100	100
Gold	260	299	370	446	713	727	874	1,534	2,239

	7.1947	8	9	10	11	12	1.195	2	3
Chinese Currency	100	100	100	100	100	100	100	100	100
Gold	2,779	2,876	3,332	5,199	7,396	9,920	12,177	16,485	31,085

	4.1948	5	6	7	8
Chinese Currency	100	100	100	100	100
Gold	42,954	68,837	130,669	364,047	629,770 ⁴⁰⁴

Inflation had caused widespread anger and frustration toward the GMD. By 1948, the GMD had lost the trust of most of the people due to corruption and ineffective governance. Meanwhile, the Communists led by Mao Zedong had gained widespread support from the peasants and was poised to defeat Chiang's GMD. On May 27, 1949, Communist forces entered

⁴⁰⁴ Wu, Gang. *Qiu Shanghai Tonghuo Pengzhang Shiliao* (The History of Old Shanghai's Inflation Statistics). Shanghai: Renmin Chubanshe, 1958: p. 145-146.
Shanghai Tongzhi, (Shanghai Almanac), Volume #8. Shanghai: Renmin Chubanshe, Shanghai Academy of Social Sciences Publisher, 1999: p. 453.

Shanghai and officially ended GMD rule in the city. On October 1, Mao proclaimed the founding of the new People's Republic of China in the capital of Beijing. Shanghai's "old society" was now over. In 1949, a new era had begun.

The history of modern Shanghai was in large part linked to the development of public transportation. The arrival of modern public transportation, machine-powered vehicles, and the construction of new improved roads facilitated the growth and expansion of the city. Public transportation transformed Shanghai from a treaty port of about half a million in 1843 to a mega metropolis of international prominence by the early 20th century. This dissertation examined the roles and impact of public transportation on the history of Shanghai through the concepts of "tradition and modernity", and the relationships between state and society, and between technology and society. These notions helped explain how public transportation systems were able to transform Shanghai, and how the technologies of public transport shaped Shanghai's urban identity by looking at the historical development and differences in each of Shanghai's three political jurisdictions. Hopefully this dissertation has added to the scholarship of the history of Shanghai as well as the history of technology in China.

Footnotes

Chapter 1

- ¹ Cooke Johnson, Linda. *Shanghai from Market Town to Treaty Port, 1074-1858*. Stanford University Press/ Cambridge University Press, 1995: Chapter 1, p.21-42.
- ² Danielson, Eric. *Shanghai and the Yangzi Delta: From Past to the Present*. Singapore: Times Publishing Ltd, 2004. P.8-10.
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